THE EFFECT OF A SUB-CULTURALLY APPROPRIATE LANGUAGE UPON ACHIEVEMENT IN MATHEMATICAL CONTENT

by

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ABSTRACT

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In this investigation one hypothesis was considered. The question--does the use of a sub-culturally appropriate language have an effect upon achievement in an academic content--was tested.

The subjects used in this investigation were children in a Follow Through Program in a school which is located in a disadvantaged neighborhood. None of the subjects had been in school for more than three years. The sample was a typical representation of the enrollment of schools in the city of Washington, D.C.--98 percent of the subjects were black. The instructional sequence was composed of concepts from nonmetric geometry.

The language patterns used for the sub-culturally appropriate language were obtained from a two-year study in the speech-community of the given school. These language

patterns were analyzed and classified by the Center for Applied Linguistics.

After the instructional sequence was constructed, a parallel instructional sequence was rewritten in a sub-culturally appropriate language. Two groups of randomly assigned subjects were taught the appropriate sequence and given appropriate assessment tasks.

The subjects taught and assessed using a sub-culturally appropriate language were able to successfully perform more task on the assessment task than those subjects who were taught and assessed using standard language. Hence, there exists some evidence to support the hypothesis that a sub-culturally appropriate language does have some effect upon achievement in academic content. The hypothesis was supported at the 0.05 level of significance.

These findings suggest that further research is needed for the identification of contributing variables and the degree of interaction of each of these variables.

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CHAPTER I

INTRODUCTION

The disadvantaged are a minority in the United States. This minority includes all races, ethnic groups, and people in certain geographic locations. As disadvantaged children proceed through school, they ordinarily perform below the "expected" at almost all grade levels on most measures. The relative standing of these groups in relation to the majority population remains essentially constant in terms of standard deviations, but the absolute difference in terms of grade-level discrepancies increase (Coleman et al., 1966) with progress through school. This increase is commonly referred to as the "cumulative deficit" (Deutsch, 1960). The few available longitudinal studies of achievement reflect essentially the same pattern as the cross-sectional Coleman survey: As disadvantaged children move through the current school system their achievement in grade levels as compared to the normative population becomes increasingly discrepant and low (Osborne, 1960).

An analysis of the characteristics of disadvantaged children suggests that these children often have language

patterns which are different from the "standard" language patterns. Teachers usually provide instruction in standard language. But instruction requires communication. All communication is a function of a symbolic system. In man, these symbols constitute language. If men wish to communicate, then they must select a language all are able to use. A question of some interest then is: Should teachers accept the learners' nonstandard patterns in appropriate situations and build on the language pattern which the learners have been accustomed to using?

The usage committee of the American Dialect Society has been attempting to make statements about usage in the publication, Publications of the American Dialect Society (PADS). The Journal of American Speech, a similar journal published by Columbia University Press, contains articles pertaining to contemporary American English usage. These publications represent attempts at recording what society judges useful or nonuseful language. There have also been attempts by groups of individuals--mostly writers, poets, editors, and teachers. The best known group of such individuals is the "usage panel," formed in 1965 by the American Heritage Dictionary of English Language, whose members are charged to appraise new words and constructions that have come into today's language. Which words and constructs

should be ushered in? Which words and constructs should be thrown out? On the whole, the panel turned out to be very free in accepting new words and phrases, but traditional in retaining grammatical constructs. For example, the words "dropout" and "escalate" were accepted but "myself," as in "He invited Mary and myself to dinner," was not accepted. One panel member, Marianne Moore, explained, "I choose always the grammatical form unless it sounds affected." The panel agreed with her philosophy and with this note took its stand (Zinsser, 1969).

Usage is in one way a complicated problem and in another way a relatively simple one. Certain pronunciations, vocabulary, and grammatical items are valued more than others for certain situations. That is the simple part. The complex part is determining exactly how they are valued and in exactly what situations they are valued. Some people use the language more attractively than others. Their way of handling the language attracts attention and people attempt to emulate them. English usage organizations formulate scales to rate usage. One scale frequently given in usage guides and English textbooks which determines what usage is good or bad is "literary," "standard formal," "standard informal," "homely," and "illiterate." Such a scale is not necessarily useful and it may be harmful. Usually, literary

is interpreted as best, standard formal as second best, standard informal as third best, homely as fourth best, and illiterate as worst. To adhere to such a scale is absurd. The only valid reason for the creation, preservation, or extinction of a word is whether it is useful to our society or not. If a word is needed, it will live; if a word is not needed, it will die (Shuy, 1966). Such a stance also reflects Thorndike's early Law of Exercise. In any particular speech-community, children may exhibit gaps or transformations in their use of certain words because of local use.

Martin Joos (1962) in his monograph, "The Five Clocks," looks at usage through four scales, each having five clocks. These scales are (1) responsibility, (2) breadth, (3) age, and (4) style. The style scale reflects dimensions of styles appropriate to occasions. Styles may be appropriate to the size of the group, the degree of familiarity within the group, or to the subject being discussed. Problems of selecting the proper style and of shifting from one style to another are of interest. But few educators attempt to learn or employ the language style of the subpopulation with which they are involved. Hence there may be a breakdown of communication before any instruction begins. The learner may never reach the point of viewing the different styles and being able to select the most appropriate one. This

behavior must be acquired. The earlier a child learns to select and shift, the easier it is to naturally use the appropriate style and be accepted by society (Joos, 1962).

One prevailing position today is that the acquisition of "the" language pattern, which is often different from the automatic and familiar one of a learner, be mastered before learning is possible (National Council of Teachers of English, 1967; McDavid, 1968). This study proposes to examine the possibility of instructing and evaluating young children using the language of their speech-community. Such an approach does not eliminate the standard language patterns but as the children learn they are given new labels to tag objects and events that are familiar to them. Gagné (1963, 1965) and others see the successful and positive experiences at the beginning of a learning situation as the basis for success in later learning experiences, i.e., "new knowledge depends on old knowledge." Children use oral language as their first mode of communication with society. We see early language development as the key to successful endeavors throughout the educative process.

General Description of the Study

The study will investigate the problem: "I might be able to answer your question if I knew what you are asking."

In many cases the language pattern habits of the questioner are not congruent with the language pattern habits of the person who is expected to answer the question.

One question is asked in this study: Do children who are taught using a sub-culturally appropriate language demonstrate acquisition of more content than those children who are not taught using sub-culturally appropriate language? The investigation is designed so that the techniques are generalizable to any given speech-community and any content area.

Summary of Chapters

In Chapter I, the problem is introduced and a rationale for its execution is discussed. Chapter II contains a review of the related literature: meaning, language development in children, disadvantaged learner, and behavioral objectives, hierarchies, and learning sequences. The experimental design and terminology are described in Chapter III. Data are analyzed and interpreted in Chapter IV. Chapter V contains conclusions, recommendations, and implications.

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CHAPTER II

A REVIEW OF THE RELATED LITERATURE

The review of the related literature for this investigation is considered in four areas: (1) meaning and dictionaries, (2) disadvantaged learner, (3) language development of children, and (4) behavioral objectives, hierarchies, and learning sequences.

Language is both an individual and a social phenomenon. It is individual because it manifests itself in the habits of each individual speaker. Language is social because it is a principal link between the individual and society. There are many theories about the meaning and development of language. Lenneberg (1969) explains language development within the context of developmental biology; Spanier (1969) describes language development in terms of mathematical logic and set theory; and psychologists believe that the development of language is a function of environment (Brown and Fraser, 1963; Brown and Berko, 1960; Miller, 1962; Hess and Shipman, 1965; Lesser, Fifer, and Clark, 1965). Presently, there isn't a single accepted explanation of how language develops.

Meaning and Dictionaries

Ever since Ogden and Richards (1930) attempted to develop a critical approach to the meaning of meaning, researchers have probed why and how individuals attach labels to objects and events with respect to environmental factors and stages of language development (Carroll, 1960, 1964; Ervin-Tripp and Foster, 1960; Kaplan, 1961; Werner and Kaplan, 1950). After theorizing how and why individuals give meaning to objects and events, efforts were made to evaluate meaning (Osgood, Suci, and Tannenbaum, 1957; Noble, 1952). Investigations such as these led to a body of knowledge which constitutes a new field of study--the meaning of meaning.

In this study meaning is not considered in such a generalized sense. The scope of this study will be restricted to the tagging or naming of concepts that are shared among the members of a speech-community (Carroll, 1964). When reference is made to a speech-community in this investigation it means whenever two or more persons are able to talk together and recognize what each other has said.

The question of whether or not there are different kinds of meanings has been discussed by scores of linguists and grammarians. The researcher favors the approach that there are three basic kinds of meanings: (1) what the

speaker intends to indicate, (2) what is suggested to a particular listener, and (3) a more or less general habit of using a given word to indicate a given thing. The third kind, often referred to as the "real" meaning, is obtained by observing the occurrence of the first and second kinds of meanings (Myers, 1952; Gleason, 1965).

Words do not maintain a strict one-to-one relation with the things symbolized. Words appear to become embedded in each individual's repertoire and become tangled with other words. In this context all words standing for something the individual can identify have associations for him. These associations are called the connotation of the word and are different for each individual. When the individual names something, he is classifying. The particular object or event he is naming has no name and belongs to no class until he puts it in one. Here lies the problem. What is the connection between individual connotations and the acceptable? Acceptable usually means: dictionary meaning of a word which is described as its denotation (Philbrick, 1951; Hayakawa, 1949).

The common purpose of dictionaries after the beginning of the eighteenth century was to exhibit only what was in the best use--the words, spellings and meanings employed by the best authors--and all else was suppressed. The

lexicographer often prided himself on the fact that he could emphatically state that no "low" or "common" word could be found in his book. The dominant sense of the word "dictionary" for English-speaking people is a book which presents in alphabetic order the words of the language and the spelling, pronunciation, meaning, and etyomology of words (Hulbert, 1955; Marckwardt, 1963).

Some dictionaries are purposely constructed with a limited scope, i.e., a dictionary of medical terms or a dictionary for preschoolers. In such a dictionary certain givens are specifically defined, including the purpose and the population to which the lexicographer addresses himself. A dictionary of this type can be used in a study like the investigation considered in this study. See Appendix A for the development and a sample of the entries made.

Disadvantaged Learner

Who is the Disadvantaged Learner?

The phrase "disadvantaged child" has many connotations. There are just as many synonyms for disadvantaged child as there are connotations. Among the most common are culturally deprived, culturally different, deprived child, ghetto child, poor black child, black inner-city child, and economically poor child.

In addition to the varying synonyms for the disadvantaged child, there are myths about the collection of these children. Johnson (1968) cited four basic myths:

1. Disadvantaged children are the Negroes in the inner-cities;
2. All these children are alike with the same needs and problems;
3. Teachers are middle-class people who don't understand the problems of the poor;
4. The great masses of the disadvantaged are angry and at the slightest provocation will erupt into violence.

Some researchers attempt to describe the disadvantaged child with respect to geographical regions. The youth may be (1) a poor white in rural Maine, the Dakotas, and the Appalachia regions; (2) Orientals in San Francisco; (3) Puerto Ricans in East Harlem; (4) American Indians in total United States; (5) Mexican Americans in California and Texas; and (6) Negroes in both rural and big inner-cities (Johnson, 1968). Other researchers use economic and educational levels of parents such as median parent income, $3,500 and median parent education, eight (8) years of elementary education (Walbesser and Carter, 1968).

Loretan (1966) and Havighurst (1965) described the disadvantaged child as one who differs from the "advantaged" in language development, self-concepts, social skills, and attitudes toward schooling and society. Cultural deprivation stems from environmental factors that are low and

psychologically disconnected was the description used by Hess and Shipman (1965).

Riessman (1962) saw the disadvantaged child with respect to the way the child approached abstraction and the way the child perceived objects. Passow, in a speech at an NDEA National Conference, June 1967, stated:

> We are not really clear as to who are the disadvantaged. . . . To be disadvantaged may actually involve various deficits, experiential and physical, which are environmentally as well as genetically determined.

The variety of disadvantage in terms of cultural or economic deviation from the middle-class American norms is too great to permit useful generalizations. Some culturally different people are commonly considered disadvantaged because they do not function well within schools based on different values. Meaningless statements should not be made in an effort to describe a given situation or a cause, i.e., the editors of the Ladies Home Journal, September 1968, described the culturally deprived child as a poor kid whose parents never talked much to him.

For the population referred to in this study, "disadvantaged" is only the latest in a series of euphemisms, which have included "slum dwellers" and just plain "poor people." These last two terms are concretely descriptive of the economic situation of these people, but by using the

term "disadvantaged" the intention is also to convey a categorization involving social or psychological variables. But there can be disadvantages only in a relative sense--disadvantaged in relation to whom and/or to what. For the purposes of this study, disadvantaged relates to the demands of the school and, later, the job market. The population being referred to in this investigation is disadvantaged with respect to what is demanded for educational attainment, occupational mobility, and advancement.

That the social milieu in which the child grows up is highly influential in determining the kinds and degree of his experience is assumed. The ghetto child has a different milieu and, therefore, a different set of experiences from the middle-class child. The Deprivation Index, an assessing instrument, when applied to households of the same socio-economic status (SES) level yields differences between families in social experiences, interaction of parent and child, organization of home and family, and so on. These differences are also found to be associated with scores on verbal and IQ measures given to the children (Whiteman, Brown, and Deutsch, 1966).

Intelligence and Race

Countless studies have been done and theories

formulated about intelligence and the testing of intelligence. Most recently attention has turned to race and intelligence (Cass, 1969; Guilford, 1968). In particular, Guilford (1968) has developed a taxonomic model known as the "structure of intellect" which has led to the discovery of many abilities not suspected before in assessing intelligence.

The most recent impressive study of the nature of intelligence, its source, and its implication for school and society was published in the Harvard Educational Review, Winter 1969, by Arthur R. Jensen. This article drew reactions from many of the leading experts in a variety of related fields. No attempt to argue the issues of "race and intelligence" and "intelligence and testing" will be made in this study. Researchers have evidence to both support and refute the hypothesis that certain minority groups have lower intelligence and/or score low on standard achievement and IQ tests. The American Negro has been usually used as the subject for the minority group.

A number of studies have demonstrated that the mean IQ of white subjects is significantly superior to the mean IQ of Negro subjects. These results can be interpreted from two points of view--non-equalitarian and equalitarian. The non-equalitarians, notably Garrett (1962) and Shuey (1958),

claim that these data are the result of innate differences in intelligence. Therefore, the Negro is constitutionally inferior to the White. The equalitarian, exemplified by Chein (1962), Klineberg (1963), and Tumin (1963) did not overlook these differences as reflected by the tests given, but objected vigorously to explanations of these data offered by Garrett and the other non-equalitarians. The equalitarians contend that no acceptable evidence has been advanced to suggest ethnic groups differ in innate abilities.

Hicks and Pellegrini (1966) reviewed studies as listed in Shuey's The Testing of Negro Intelligence. Shuey's book represented the definitive work in the area of Negro intelligence at the time of its publication. Subjects of the studies were nearly 55,000 Negro elementary or preschool children and 25,000 Negro high school and college students, representing every southern state and a majority of the large Negro population centers in the North. Shuey's studies had many critics because she drew conclusions beyond her data. Shuey's (1958) thesis was: "There are some native differences between Negroes and Whites as determined by intelligence tests." Using the estimate of ω^2 and the criteria that (1) the study had a recognized measure of IQ, and (2) the study included sufficient data for the computation of the estimate of ω^2, Hicks and Pellegrini re-evaluated studies in

Shuey's work. The median value for the estimate of ω^2 was .061, which is thought to best represent the strength of association between skin and intelligence. It was concluded that studies of racial intelligence have failed to establish the existence of meaningful ethnic differences in intelligence. Hence, any interpretation of racial IQ data that stipulates differential treatment of Negro and White is unwarranted. There are no studies to show that a change in pupils' skin color will lead to improved intellectual performance (Rosenthal and Jacobson, 1968).

Currently Deutsch and Brown (1964) are attempting to measure the ingredients of deprivation with the aim of "developing a topology of deprivation which organizes experiences in developmentally relevant groupings that can be related to sources of socially-determined variation in IQ performance."

One of the most important criticisms of IQ tests is that they contribute to their validity by functioning as self-fulfilling prophecies (Goslin, 1968). Hypothetically, a child who does well on a test, as a consequence of his performance is placed in an advanced class, or receives special attention from his teachers. The likelihood that the optimistic prediction made on the basis of a high test score will be fulfilled is therefore increased because the

person who does well receives special advantages, whereas the person who does poorly is often denied opportunities.

No experimental data from any study confirm the expectation hypothesis. Rosenthal and Jacobson (1968) in their study concluded that the expectation hypothesis was supported by data obtained in four elementary schools in California. Thorndike (1968) cites some discrepancies in the original data, hence the hypothesis cannot be said to be supported. Those who look at IQ scores as true predictors of every aspect of development and growth have no evidence to support their claim. Until such evidence is made available, educators ought to use caution in assessing growth and development with IQ scores.

There must be some way of assessing specific groups of children who have cultural backgrounds that are different from the majority in a fair manner. One of the aims of the educative process is to provide appropriate opportunities and experiences to each child. If the assessment is biased, then the predictions and implications are unreliable and useless.

Culture-Fair Testing

The 1950s saw many attempts to devise "culture-fair" or "culture-controlled" tests of intelligence. The purpose

of such tests was to discover or demonstrate a "true" level of intellectual ability in socioeconomically disadvantaged children, presumed to be grossly underestimated by traditional intelligence tests. The usual tests were shown to contain some items which discriminated more than others among social classes. Such items were said to be culturally biased in favor of the middle-class child.

There can be many varieties of culture-fair tests--at least as many varieties as there are parameters along which cultural groups differ from each other. A well-known example of such a parameter is language. If the cultural groups to be tested speak different languages, then one solution is to construct a test that requires no use of language on the part of either the examiner or subjects. This type of test is illustrated by the Army Group Examination Beta and the Pinter Non-Language Primary Mental Test. It is also illustrated by some of the earliest individual performance tests, such as those developed by Knox during the early part of this century to test immigrants at Ellis Island. The Knox Cube Test, later incorporated into the Wechsler Scales, originated in that project.

Another type of culture-fair test is the non-reading test, which calls for extensive use of spoken language by the examiner, but no reading by the subjects. A relatively

recent example of such tests is provided by Flanagan's Tests of General Ability, or TOGA. Extending from the preschool to the adult level, this test demands knowledge of spoken English and considerable information specific to the modern American culture; but it requires no reading. Many individual performance tests fall into this category.

Cultures and subcultures frequently differ in the emphasis they place upon speed to perform a task. Not only the tempo of daily life, but also the motivation to hurry and the value attached to rapid performance vary widely among national cultures, among ethnic groups within a single nation, and between urban and rural subcultures. Accordingly, cross-cultural tests have sometimes tried to rule out the influences of speed by allowing long time limits and giving no premium for faster performance (Anastasi, 1964).

Still another parameter along which cultures differ pertains to test content. Most non-language and non-reading tests, for example, call for items of information that are specific to certain cultures. On a non-language test may be found culturally linked objects--stamps, piano, baseball player, and so on. It was chiefly to control this parameter that the classic "culture-free" tests were first developed. In the Raven's Progressive Matrices, an attempt was made to include only content common to a wide variety of cultures.

The Davis-Eells Games represent an attempt to control content parameters with regard to socioeconomic classes within the urban American culture. In this test only items are used that would be as familiar to lower-class as to middle-class children in American cities.

When is a culture-fair test not culture-fair? When it fails to control relevant cultural parameters.

Anastasi (1964) hypothesized that culture-fair tests are the answers to assessing culturally different individuals and that culture-fair tests endeavor to utilize what is common in the experiential backgrounds of different cultural groups. The culture-fairness of any test is not universal, but must be evaluated in terms of the cultural differentials of particular groups.

We are interested in not only the usage of culture-fair testing for assessment but the possibility of using a culture-fair language in developing learning hierarchies, instructional sequences, and learning experiences. The population used in this study happens to be Negro children, but the design of the investigation assumes any particular group.

Language Development of Children

All children listen to sounds in their environment. As they grow older, children learn how to discriminate among

utterances, to make sentences, to recognize and manipulate structural meaning, and to communicate with others with respect to some symbolic system. The studies of Noell (1953), Smith (1958), Strickland (1962), Loban (1963), and others confirm that most children beginning school have already learned to use whatever sound system, grammar, and vocabulary are characteristic of their speech-community. Loban (1963) reports that vocabularies and speaking habits are almost completely set by school age. Children usually learn to develop their language patterns through listening and speaking. Oral language--speech--is the basic pattern to all language patterns. The individual speech-communities provide the child with the characteristics that generate his own language pattern. Children learn their characteristics by ear and experiences and at an early age imitate them. Research indicates that a child's language patterns are basically set by school age. This study looks at the development of language in children.

The most important contribution that modern linguistics has brought to child language studies is its conception of what is meant by language. A language is a system that can be described in terms of two primary parts: (1) the phonological (sound system), and (2) the grammatical. A complete description of a language would include an account

of all possible phonological sequences and also a set of rules by which we can predict all the possible sentences in that language. One can study the child's developing language system from two viewpoints: first, the child's own system--a description of his own sound system and the set of rules he uses to form sentences, and second, progress in the mastery of the linguistics system of the model language or speech-community.

There is a dispute in the literature concerning the nature of the language abilities of economically disadvantaged Negro children. The three main viewpoints concerning the linguistic system of these Negro children can generally be categorized as follows:

1. Many such school children are verbally destitute. That is, they have not yet developed a functionally adequate structurally systematic language code (Raph, 1967). Generally such studies tend to explain the absence of language development in the child on such environmental factors as noise in the environment and sensory--social deprivation. The body of literature that supports this position is generally composed of studies that placed middle-class children and lower-class children into typical middle-class

testing situations and then counted the different types of utterances; response units were tabulated in terms of middle-class standard English norms, and white standard English speakers were used as the control groups. Rare has been the study that has controlled for ethnicity and socio-economic status of the children, to say nothing of the non-existence of the study that controlled for race and class of the children to be tested but also for the effect of race of the examiner on the behavior of the subjects (Clark, 1965; S. Baratz, 1967).

2. Such children have systematic but underdeveloped language behavior and, therefore, their underdeveloped system leads to cognitive deficits (Bernstein, 1960; Bereiter, 1965; Deutsch, 1965; Hess, Shipman, and Jackson, 1965). The assumption of these studies were not merely that different speech systems created different cognitive patterning but, in addition, that various speech systems could be ranked hierarchically concerning abstraction and cognitive complexity. This group of studies tended to give credence to the fact that such children could talk, but that their

speech was characterized by a limited vocabulary and a restricted sentence structure. It was assumed that only a few of their constructions could be matched with standard English and that the other parts of their language corpus represented random unstructured errors in language behavior. Most of these studies have used middle-class settings and middle-class-oriented tasks upon which comparisons have been made. The middle-class child or standard English (language of the middle-class child) has been used as the control against which the disadvantaged Negro child was measured. The majority of the cognitive underdevelopment research was given its primary thrust by the writings of Basil Bernstein (1959, 1961, 1962a, 1962b). The usual facet of a good deal of the research using the cognitive underdevelopment model is the assumption that there is a direct relationship between overt language form and concept formation. Bernstein's theories have influenced researchers in this country. For example, the presence or absence of a specific word from that which has a definite structural relationship in standard English has

been taken as the definition of whether or not a particular concept is present for the children (Bereiter and Engelmann, 1966). Bereiter (1965) states: "If the child does not know the word not . . . he is deprived of one of the most powerful logical tools of our language."

3. These children have a fully developed but different system from that of standard English (Stewart, 1965, 1967, 1968; Bailey, 1967; Baratz and Povich, 1967; Labov, 1965; Dillard, 1967). These studies do not question whether the child has learned a language or whether he can use his language to think abstractly. These researchers see the language problem of culturally disadvantaged Negro children not as that of linguistics competence, but rather as one of linguistic interference between their own highly developed system and that of the standard English. This viewpoint, language differences, is supported by the research of linguists. This research indicates that there is definite structure to the "errors" of standard English that the Negro non-standard speaker makes. His language does not represent a pathology, a failure to learn the rules of a

linguistic system, but rather it represents the fact that he has learned some different, equally highly structured highly complex rules of language behavior.

Cutts (1963), Smiley (1964), and Green (1965) have pointed out that the values, attitudes, and culture of the "different" are not like those of the middle-class, and that the "different" has developed another language. Thus, it is not valid to evaluate the language of one culture with the norms from the language of a different culture; only comparisons as to the similarities and differences between them can be made. If the method of judging one system by another's rules is retained, then one consequence would be that middle-class children are verbally "destitute" or "underdeveloped" in language acquisition. This conclusion would follow because there are forms which are used by culturally different children, but that are not within the verbal repertoire of the middle-class child. A linguistic analysis of the culturally different language patterns which simply ask "What forms look like standard English?" allows the researcher to view variations between culturally different and middle-class language structure as differences rather than as deficiencies.

Results of research by Baratz and Povich (1967) indicate that (1) there are two dialects involved in the education

complex of black children (especially in schools where a white middle-class curriculum is oriented), (2) black children are generally not bi-dialected, and (3) there is evidence of interference from their dialect when black children attempt to use standard English. This particular research looked at black children who were from areas designated as disadvantaged. The implication of this research is clear. If the criterion for language development is the use of a well-ordered systematic code, then the continual use of measures of language development that have standard English as the criterion of a developed form will continue to produce the results that the Negro deprived child is delayed in language development. That is, he has not acquired the rules that the middle-class child has been able to acquire. Using standard English criterion for tests that ask "How well has standard English been developed in the child?" is excellent; however, using standard English as criterion for tests that ask "How well has this child developed language?" is absurd if the primary language that the child is developing is not that which the teacher calls standard English.

Behavioral Objectives, Hierarchies, and Learning Sequences

The educator has long been concerned about the components that he must set up for instruction and evaluation

of the learner. There are some basic givens: (1) a body of knowledge that he desires the learner to gain, (2) a vehicle to transmit this knowledge, and (3) a way to evaluate how much the learner has attained after instruction. Countless books have been written prescribing the "best" approaches to the educative process. Obviously some of the approaches are not effective in getting the job done. One group of educators, identified as behaviorists, focused upon the creation of (1) behavioral objectives, (2) hierarchies, (3) instructional sequences to assist the learner in acquiring a set of desired behaviors, and (4) terminal tasks which indicate whether or not the learner has been successful. The behavioral group applies this philosophy to all content areas in curriculum development, but perhaps the best known are Science--A Process Approach and the University of Maryland Mathematics Project.

Gagné, Mayor, Garstens, and Paradise (1962) describe factors in acquiring knowledge of a mathematical task:

> . . . a class of human tasks to be learned can be analyzed into a hierarchy of subordinate learning sets, which mediate positive transfer of learning in a unidirectional fashion from one to another, and ultimately to the final performance. Such an analysis is expected by asking the question of the final, "what would the individual have to know how to do in order to perform this task, after being given only instruction?" and successively asking the same question of the learning sets so defined, until one describes a hierarchy, containing very

> simple and general learning sets at its lowest level. Besides differences in basic abilities, the theory affirms that learners begin a particular learning program (or learning situation) with different patterns of subordinate learning sets. If the learning program is successful, it insures positive transfer from lower level to higher level learning sets for each individual learner, and thereby reduces individual differences in achievement of all subordinate learning sets in the hierarchy, as well as the final class of task.

This study considers the language as well as the content used to give instruction and for evaluation. If the learner has no idea what is expected of him how can he perform? There is a need for effective communication between learner and instructor at all times during the educative process. Why the approach of using behavioral terms in attempting to eliminate the question of communication?

Walbesser (1966) states that the purpose of any instructional material is "to effect learning" and from this goal arises two natural questions: (1) what is to be learned, and (2) who is to learn it?

Every educator has a set of tasks that he wishes a child to be able to perform at the end of his elementary school years. He realizes that the set might have a time range of three-to-nine years. There must be some efficient way of accomplishing such a feat. How to be successful in accomplishing this feat depends upon who is to learn the set of knowledge. If the learner is the most important component

in the educative process, then the language he uses for communication must be considered in the design of instruction for him. Certainly his language skills and experiences are the vehicles in which he moves along the learning continuum. To be fair to him, the instructional material must reflect his experiences and language skills. This position does not suggest a different set of concepts, but rather a different set of language skills geared to a specific speech-community, i.e., the same concepts are taught, but the language and experience reflects the given population.

To state a set of objectives has little or no merit if the objectives are not appropriate for the specific program and population. Krathwohl (1965) suggested the purposes for objectives:

1. call for a description of the situation which ought to initiate the behavior in question
2. a complete description of the behavior
3. the goal of the behavior
4. a description of the level of performance of the behavior which permits us to recognize a successful performance.

These descriptions are shared by many others, including Mager, Gagné, Walbesser, and Hunt.

Researchers have verified that "new knowledge" depends upon "old knowledge" and experience. The ease of acquisition of new knowledge and skills--learning--is based in large part

on the prior experience and knowledge of the organism. The nature of the stimulus--its organization, speed, and manner of presentation--is influential in acquiring new knowledge. The relationship established between the experiential background of the organism and the nature of stimulus presentation is what Hunt (1961) refers to as the "match." The most outstanding implications of Gagné's studies with respect to learning in mathematics is that "acquisition of new knowledge depends upon the recall of old knowledge." Everyone does not agree that behavioral objectives are the answer to some of our curriculum problems. Some educators, for example Haberman (1968) and Atkins (1968), attempt to give a view from both sides and point out the advantages and disadvantages of behavioral objectives. The chapter on the design of this study will describe the use of behavioral objectives, learning sequences, and instructional sequences in this investigation.

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CHAPTER III

EXPERIMENTAL DESIGN

For the development of an instructional sequence using a sub-culturally appropriate language for a given speech-community the following considerations are deemed essential:

Techniques for language investigation.

Constructing and instructing an instructional sequence with respect to a language appropriate to that given speech-community.

Analysis of the total procedure with respect to contributing factors and variables.

Variables defined and/or explained.

A description of the experimental procedure for developing such an instructional sequence for a given speech-community is presented in this chapter.

Definitions

The first nine definitions were taken from the Glossary of Linguistic Terminology (1966):

1. Standard language. That dialect of a language which has gained literary and cultural supremacy over the

other dialects and is accepted by the speakers as the most proper and socially desirable form of the language [p. 258].

2. Dialect. A specific branch or form of a language spoken in a given geographical area, differing sufficiently from the official standard or literary form of the language in one or all of the levels of the language (pronunciation, grammar, vocabulary, and idiomatic use of words) to be viewed as a distinct entity, yet not sufficiently different from the other dialects of the language to be regarded as a separate language; a dialect often has its own literary form, and the distinction between language and dialect is often difficult to formulate on either literary or political bases; major dialectal areas are somewhat arbitrarily established on the basis of the coincidence of bundles of isoglosses, but the term is often loosely applied to the speech form of a minor locality [p. 67].

3. Isogloss. A line separating areas called isogloss areas, where the language differs with respect to a given feature or features; a line marking the boundaries within which a given phenomenon or feature is to be found (Dorfam). [p. 133.]

4. Idiolect. a. The individual's use of language, with his own speech habits and choice of words (Walsh); the individual's personal variety of the community language

system; the speech habit of a single person at a given point of his lifetime. b. Term used in American linguistics to describe the ideal minimum phonemic system (of one individual), in which there is nothing else than random variation [p. 119].

5. Morphology. The science and study of the smallest meaningful units of language, and of their formation into words, including inflection, derivation and composition, and distinct from syntax; the study of the ways and methods of grouping sounds into sound-complexes, or words, of definite, distinct, conventional meaning (Dorfam); the study of constructions in which bound forms appear among the constituents (Bloomfield). [p. 169.]

6. Phonology. a. A full description of the sounds of a language. b. A study of the changes, modifications, and transformations of speech sounds during the history and development of a language or dialect, considering each phoneme in the light of the part it plays in the structure of speech forms, and accepting it as a unit without consideration of its acoustic features (Dorfam). Phonology may be subdivided into two branches: Historical (the history and theory of sound changes), and Descriptive (the sounds of the language and their permissible combinations at any given historical stage). [p. 207.]

7. Lexicon. The total stock of linguistic signs (words or morphemes or both) in a given language; the list of all the words in a language; a dictionary [p. 147].

8. Corpus. A sample of utterances for analysis (Gleason); a collection of recorded utterances used as the basis for a descriptive analysis of a language or dialect [p. 57].

9. Code Switching. The interpretation of phonemes as produced by different conditions (Gleason). [p. 42.]

The following three definitions were taken from What's What (Walsh, 1965):

10. Utterance. A meaningful unit of speech. For language practice, long utterances are broken into partial, 5- or 6-syllable segments that are often meaningful by themselves [p. 33].

11. Center for Applied Linguistics (CAL). An affiliate of the Modern Language Association, established in 1959 with support from the Ford Foundation. It concerns itself especially with the teaching of English as a Foreign Language, with application of linguistics to Foreign Language teaching [p. 14]. [Investigator's note: Recently the CAL has researched dialects, especially those in the large inner cities.]

12. Linguistics. The systematic study of language or one or more languages or dialects. Applied linguistics refers to the use by language teachers of the findings of the linguist [p. 22].

Definitions 13-17 have been taken from An Evaluation Model and Its Application, Second Report (Walbesser, 1968). The entire report should be read to unify the concepts and not as isolated definitions.

13. Behavioral Objective. A behavioral objective is a statement that reliably communicates the intent of instruction to the learner by means of descriptions of observable behavior.

14. Assessment Task. An assessment task is a task designed to test whether or not an individual has acquired a behavior described in a behavioral objective.

15. Learning Sequence. A learning sequence is any collection of more than one behavior related to another in some specified manner.

16. Instructional Sequence. An instructional sequence is any collection of more than one instructional task related to another in some specified manner.

17. Terminal Behavior. A terminal behavior is the most complex behavior in a learning sequence.

The next three definitions are from separate works:

18. Follow Through Program. The Follow Through Program is a program created early in 1967 by the Office of Economic Opportunity to carry forth graduates of the Head Start Program into primary grades and attempt to maintain the gains that the Head Start Graduates have made [Butler, 1968:16].

19. Meaning. Meaning is the naming of concepts that are shared among the members of a given speech-community [Carroll, 1964:178-202].

20. Culture-fair Tests. Culture-fair tests are tests that endeavor to utilize what is common in the experiential backgrounds of different cultural groups [Anastasi, 1964:26-30].

Definitions 21-23 were constructed by the investigator to describe some of the important variables in the investigation:

21. Speech-community. A speech-community is any group of two or more persons who are able to talk together and recognize what each other has said.

22. Disadvantaged Learner. For the purpose of this investigation, the term disadvantaged learner is used as it relates to the demands of the school and, later, the job

market; the population being referred to are disadvantaged with respect to what is demanded for educational attainment and occupational mobility and advancement.

23. Sub-culturally Appropriate Language. A sub-culturally appropriate language is a language that utilizes language patterns of a specific speech-community which have not gained literary and cultural currency over the language patterns of other dialects of a given language and which are common to the speakers in a given sub-cultural speech-community.

Language Investigation

Introduction

Language patterns are essential to the development of the instructional and evaluative materials in this investigation. Perhaps the best known studies to date on the techniques of collecting data on language patterns are The Language of Elementary School Children (Loban, 1963) and Urban Language Study (Shuy, Wolfram, and Riley, 1968). The Bereiter and Engelmann (1966) study does not give techniques for collecting and formulating language patterns; this work is akin to Piaget's inasmuch as the investigators functioned as observers who postulated procedures and techniques of teaching disadvantaged children in preschool. If

there are data connected with their work, none are reported or referred to in their writings. Dr. Bereiter, speaking at the French Lick Conference (conference of the Task Force of National Council of Teachers of English) June 24-27, 1965, cited many conclusions based on his observations. Several participants attending the French Lick Conference suggested that Dr. Bereiter present normative data, systematically collected over a period of years before firm generalizations be advanced about language behavior of the disadvantaged child (Corbin and Crosby, 1965).

Loban (1963:1) states that the major questions of his longitudinal study are:

1. Just as in physical development, are there predictable stages of growth in language?
2. Can definite sequences in language development be identified?
3. How do children vary in ability with language and gain proficiency in using it?

Loban also describes the design of the study, the sample, data collected, and the techniques used. The investigation under consideration does not attempt to be a replication of Loban's study because the question asked is not the same.

The techniques used by Shuy, Wolfram, and Riley (1968:ix) are more compatible with the question asked in this investigation. They state:

> As a methodological study, this work is generally descriptive rather than theoretical in order to provide a practical base for large-scale urban language study. . . . It is the embodiment of one approach to the problems posed by large-scale research projects in sociolinguistics . . . .

Although this investigation is not a large-scale sociolinguistics study, it is an urban language-based investigation centered around one specific speech-community. The objectives of the Urban Language Study by Shuy, Wolfram, and Riley (1968:1-3), whose aim was to identify linguistics correlates of social stratification in Detroit speech, were:

1. To describe the specialized linguistics features of the various English speaking sub-cultures of Detroit.
2. To determine the most efficient methods of language data gathering in an urban area.
3. To determine effective methods of language data storage, retrieval, and analysis.
4. To provide accurate and useful language data upon which educational applications can be based.

The objective of the description of language pattern construction is to describe the method used to collect language patterns for constructing instructional materials and assessment tasks for a given speech-community. Language patterns were gathered from informants in the given speech-community.

Language studies (Bereiter, 1965; Thomas, 1962; C. Deutsch, 1964; Klaus and Gray, 1968) of the economically deprived or culturally different child have often used

measurements based on the standard dialect as their criterion of language development. These measures are selected because of an implicit assumption that nonstandard dialect represents, at most, mere low-level modification of standard English. Since it is likely that a culturally deprived child is learning a different dialect from that of standard English, it is important to identify the learner's competence in the language that these children are learning--the language which is in their social environment. If the researcher wishes to assess these children's language development (Baratz, 1968a, 1968b; Stewart, 1967), then the dialect information is critical. When children's language development is assessed by how well they have learned standard English, the measurement is maybe testing their abilities in a dialect that may be, at most, peripheral to their experience and linguistics environment (Joos, 1964; Stewart, 1966). A more sensible tactic is to first identify the characteristics of the particular speech patterns which the disadvantaged child is using.

A number of investigations, including the present, consider that disadvantaged children have a fully developed but different system from that of the standard system (Stewart, 1965, 1967, 1968; Bailey, 1967; Baratz and Povich, 1967; Labov, 1965; Dillard, 1967). There are situations

where one is able to draw parallels between these different systems. But there are also situations in which one cannot draw parallels. (See Appendix B for some grammatical features of Negro dialect as developed by the Sociolinguists Program of the Center for Applied Linguistics.) In this investigation the researcher has attempted to incorporate consistently and uniformly such of the enumerated features as were deemed appropriate in the learning situation under consideration.

Sampling Procedure

1. Sample. All the children in this investigation are pupils at an elementary school in Washington, D.C. In addition, informants who are not children were utilized. These were adults who either are professional or nonprofessional workers in the school or live in the immediate community in which the school is located. Only those children who had not been in school for a period of more than three years were considered. The children were also participants in a Follow Through Program (Butler, 1968).

2. Drawing the sample. From the basic sample of children, the researcher randomly recorded idiolectal patterns of children while they participated in routine activities. Tapes were made of teacher-led activities,

free-play activities, reactions to questions by the researcher, lunchroom talk, and several other occasions in which the children were speaking freely. When the tape recorder was not available, the researcher recorded as accurately as possible the dialogues of speakers. No attempt was made to record the adults in a structured situation. Only free conversation, group conversations, and programs by adults were recorded. This total collection of recordings was made over a period of two years.

No attempts were made to record names of the informants. The researcher wanted only to collect utterances of the given speech-community in order to gather a basis for writing the instructional materials and assessment tasks. Since the informants were randomly selected, some appeared later as subjects in the instructional section of the investigation.

Instructional Sequence

Introduction

The instructional sequence consisted of sixteen levels of learning tasks. The degree of complexity of the tasks correspond to the ordinal numbers in a numerical sequence. The mathematical content of the sequence was selected for this particular population. To verify that

the content and instructional tasks were appropriate the K-2 textbooks of the following textbook series were reviewed: (1) School Mathematics Study Group--Yale University Press; (2) Elementary School Mathematics--Addison-Wesley Publishing Company; (3) Greater Cleveland Mathematics Program--Science Research Associates, Inc.; and (4) Elementary Mathematics--Holt, Rinehart and Winston, Inc. A copy of the instructional sequence is included in Appendix C.

Selection of Sample

Forty children were selected to serve as subjects for the investigation. The children were in a Follow Through Program and had attended school for, at most, three years. Four children--two boys and two girls--were chosen from ten different classrooms each. In order that the selection would be random, the following procedure was utilized:

1. All lists of individual class rolls were compiled. Ten class lists were chosen by assigning each class list a number and employing a random numbers table.

2. Two boys and two girls were randomly chosen from each of the ten class lists.

Procedure

The investigator randomly assigned the sample subjects to two groups: Sub-culturally Appropriate Language

(SA) and Standard Language (S). All subjects were assigned and each group had an N of twenty.

The ten teachers were shown the names of the subjects selected from the classes. The teachers were asked to verify that the subjects: (1) had not been in school more than three years, (2) were still in school, and (3) were available for the full investigation period. Also, the teachers were informed of the purpose of the investigation, why the selection of teachers and subjects had to be random, and that no names of any individual involved in the investigation be made public. Each teacher also verified that the subjects had not been taught the content in the instructional sequence. The schedule of instruction was shown each teacher to verify no conflict with the regular school program. Several teachers pointed out that October 31st would be used for a special assembly program and Halloween Party. The schedule was adjusted accordingly. Table 1 following shows the schedule of instruction.

TABLE 1

SCHEDULE OF INSTRUCTION FOR INSTRUCTIONAL SEQUENCE--1969

	October			November	
	28th	29th	30th	3rd	4th
9:30	S	SA	S	SA	S
10:30	SA	S	SA	A	SA

This time schedule was used to ensure that all factors involved might be equalized as much as possible.

Instructional tasks for both groups were written following the instructional sequence. One set was written in standard language and another set in the sub-culturally appropriate language. A panel of judges was used to verify that the tasks for each item in the instructional sequence for each group conveyed the same mathematical content. Several tasks had to be rewritten until at least two judges agreed with the investigator. The total average of agreement of the judges with the investigator for the tasks used was 90 percent. The panel consisted of two mathematics educators and one language expert. (See Appendix D for the panel judgment.)

The mathematical content was taught daily to the subjects according to the schedule in Table 1. (See Appendix E for the log and samples of the daily lessons.) During instruction, tapes were made of both groups.

The assessment was given both groups on November 5, 1969. The SA group was evaluated at 9:30 and the S group was evaluated at 10:30. The tasks were pool items from the instructional sequence. (See Appendix G for the assessment tasks.)

All instruction and assessment were given orally

because the majority of the subjects were non-readers. The same materials and visual aids were provided for both groups. (See Appendix F for a sample of worksheets with the instructional frame indicated.)

Hypothesis: Statements and Procedure for Analysis

The research question stated in Chapter I was written as a research hypothesis and as a statistical hypothesis.

Research Hypothesis

Using a sub-culturally appropriate language has an effect upon achievement in an academic content.

Statistical Hypothesis

$H_0 : \mu_{SA} = \mu_S$

$H_1 : \mu_{SA} \neq \mu_S$

Statistical Test

The F-max test for samples of uniform size was used to test the hypothesis that the two samples had the same variance. The 0.05 level of significance was required for the acceptance of the hypothesis.

An analysis of variance was used to test the null hypothesis that using a sub-culturally appropriate language does not have any effect upon achievement in an academic content. The 0.05 level of significance was required for the rejection of the null hypothesis.

Summary

This investigation concerned two areas: language and instruction. Each of these areas is a discipline within itself. Many variables and factors interact and influence each other and, hence, control for every single variable and factor was not possible. The investigator could only describe the given situation and the outcome in terms of observable behavior.

Language was considered first since the instructional sequence and assessment utilized the language patterns of the given speech-community. When languages are studied, three main features are investigated--phonology, morphology, and lexicon. Each of these features, too, is an area of study within itself. For this investigation the primary considerations have focused upon the more essential and dominant aspects of morphology and lexicon.

The application of language as a tool for instruction is general and flexible. Not only must the actual spoken utterance be analyzed, but other dimensions, for example, "body language," must be interpreted. If different regional English patterns (Cassidy, 1969) are employed in a controlled experiment, then the investigator has to be conscious of the possibility that code-switching will take place. No person is able to completely and consistently

switch from code to code (Wolfram, 1969) and converse absolutely in some specific code different from his own code. The two codes, obviously, which were in use in this investigation are not totally distinct and disjoint; a certain element of overlap between the two dialectical patterns certainly occurred. The investigator did, however, make a conscious and concerted effort to choose, at each known occurrence of any conflict point between the two codes (most especially in the areas of syntax and lexical selection) the dominant feature or features of the code initially specified as the dialect of instruction for the given group. This is to say, then, that the investigator was aware of many major points of morphological and syntactical conflict between the two dialects; at each stage of instruction the dominant morphological, syntactical, and idiomatic features of the dialect selected for each respective group were chosen and utilized as consistently as possible. There was some attempt, too, on the part of the investigator to use such phonological conformations and renderings as were appropriate to each dialect in each respective situation.

The investigator was aware of the many dimensions of language and no attempt was made to study, record, and analyze all of them. Emphasis was placed on grammatical features and the lexicon of the codes. Appropriate phonological

items were utilized for communication within a given code. For this investigation these three aspects were within the scope of the design. There is admittedly an element--perhaps a strong one--of subjectivity here. The investigator considers herself to be bidialectal to a fairly high degree; her understanding and intuition of what is involved in production of sequences in either standard language or in the sub-culturally appropriate language is based on conscious study as well as membership in groups characteristically making use of each of the dialects. The investigator is of Afro-American descent herself, and educated through high school in a relatively encapsulated Afro-American non-urban community. Her later development and education have occurred within social and educational institutions which would generally be denominated middle class Euro-American. Hence, a certain familiarity with both the cultural patterns, mores, and language patterns of each of the two communities is presumed. It is felt, however, that the element of subjectivity, if it be frankly recognized as such, does not invalidate the study. One:

> . . . must not shrink from noting the subjective and relative as such where they occur, or from confessing that a given object of . . . scrutiny eluded, or that in a given case the inadequacy, perhaps the inaccessible, of reliable knowledge makes evaluation . . . impossible. What is unscientific and uncritical is not to observe and report subjectivity, relativity,

> and ignorance, but to mistake these for or to pretend that they are their opposites [La Driere, 1960].

A conjecture was made by the investigator about a particular mathematical concept to be taught a given population of a speech-community. The instructions were written in steps ranging from the least complex to the most complex. This arrangement is called an instructional sequence. Many educators attempt to structure a learning situation by constructing behavioral hierarchies which can be validated and reliability ratios computed (Walbesser, 1968).

Presently, no known researcher has attempted to treat a given speech-community with respect to a content area such as mathematics. Therefore, there are no researchers to quote or criticize. In this investigation, no claims were made that a group taught with respect to a sub-culturally appropriate language would score high on an assessment task because of any single language variable. The investigator merely conjectured that for the particular speech-community and methods described, using a sub-culturally appropriate language would produce a high score on an assessment task. All of the variables which were involved would react and interact with each other and produce a better result. Certainly, in one investigation one cannot be expected to produce all of the "whys" for given results.

In Chapter V, the results are analyzed and an attempt is made to discuss the implications. Recommendations for further research are suggested and limitations of the present investigation are given.

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CHAPTER IV

EXPERIMENTAL DATA: ANALYZED AND INTERPRETED

The research hypothesis, the effect of a sub-culturally appropriate language upon achievement in an academic content, was tested using a one-way analysis of variance. All requirements for this analysis were met and the homogeneity of variance as tested and verified by the F-max Test is presented.

The data presented in Table 2 supported the decision to accept the hypothesis at the 0.05 level that the two samples have the same variance. The formulas and raw data are presented in Appendix H.

TABLE 2

APPLICATION OF F-MAX TEST FOR VARIANCE

	N	s^2	F-max
Sub-culturally Appropriate Language	20	4.34	1.27
Standard Language	20	3.40	

After the acceptance of homogeneity of variance, a one-way analysis of variance was made. The raw data and formulas for this analysis are presented in Appendix I. The results of the analysis are presented in Table 3. On this evidence the null hypothesis of no effect upon achievement at the .05 level was rejected. The rejection region was $F = 4.10$. The investigator claims that the experimental use of a sub-culturally appropriate language causes the identification of achievement in an academic content. The investigator further claims that under the given conditions of the investigation, those subjects who were taught using a sub-culturally appropriate language performed better on an assessment of the same material taught subjects using standard language.

TABLE 3

ANALYSIS OF VARIANCE SUMMARY TABLE FOR THE TESTING OF THE RESEARCH HYPOTHESIS

Source	SS	df	MS	F
Between	30.61	1	30.61	7.57
Within	153.79	38	4.04	
Total	184.40	39		

An indication of the number of subjects in each group correctly answering each of the nine assessment tasks is presented in Figure 1. Tasks five and six are the only tasks for which the number of subjects answering correctly from both groups are the same. For all other tasks, the number of subjects in the sub-culturally appropriate language group correctly answering is greater than the number of subjects in the standard language group correctly answering. The occupation of the father, age in years and months of the subjects, and the length of time attending present school in years and months of the subjects are presented in Appendix J.

Summary

The research hypothesis is that a sub-culturally appropriate language does have some effect upon achievement in an academic content. These data are analyzed according to the design of the investigation. Additional findings and implications are presented in the following chapter on conclusions, implications, and recommendations.

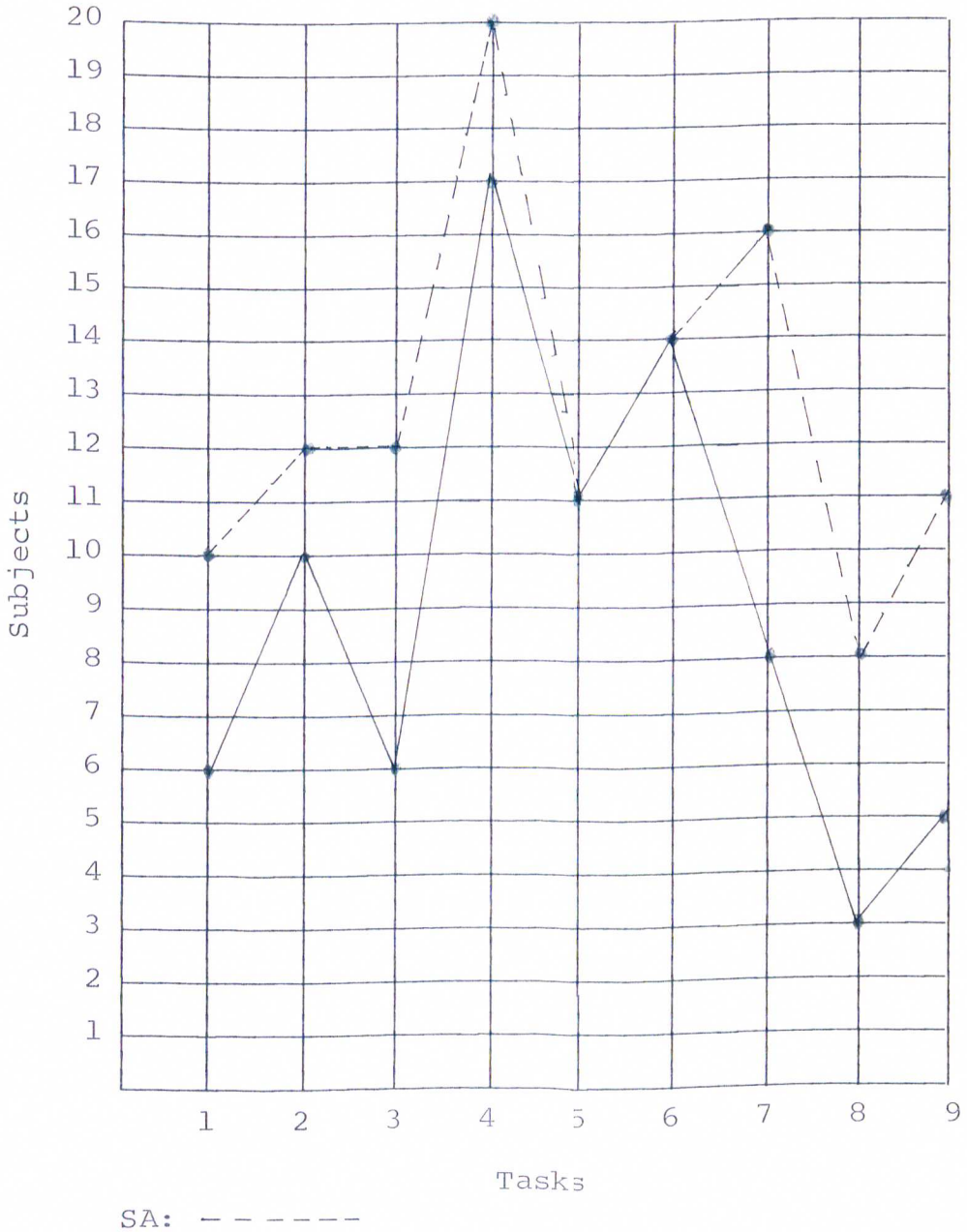

Fig. 1.--Total number of subjects correctly answering each task for the two groups.

CHAPTER V

CONCLUSIONS, RECOMMENDATIONS, AND IMPLICATIONS

Introduction

This investigation was an attempt to test the hypothesis that using a sub-culturally appropriate language has an effect upon achievement in an academic content. Mathematics was not selected because mathematics is a well organized language, but because the investigator is a mathematics educator. This undertaking was an initial effort and must be considered as such. Further investigations and studies with different speech-communities will have to be made before any generalizations can be formulated.

The investigation included (1) a review of the related literature; (2) a description of collecting language patterns, developing a lexicon, constructing a learning sequence, and assessment tasks that utilized a sub-culturally appropriate language; and (3) a statistical analysis of the data. One research question was posed:

> Do children taught using a sub-culturally appropriate language score higher on an assessment

task than children who are not taught using a sub-culturally appropriate language?

This research question was stated as an hypothesis:

Using a sub-culturally appropriate language has an effect upon achievement in an academic content.

The discussion of this question is described in this chapter in three sections: (1) limitations of the investigation; (2) conclusions; and (3) implications and recommendations for further study.

Limitations of the Investigation

The research was carried out in a school whose pupils were designated by society and the United States Office of Education as disadvantaged. This disadvantaged segment was classified with respect to the economic conditions of the parents who send their children to this particular school. The school itself lies in an area whose political district is not totally disadvantaged. The majority of the children who attend this public school are black.

The children were in a Follow Through Program and had not been in school for more than three years. No attempt was made to conduct individual case studies of the subjects. Therefore, socioeconomic variable patterns that might have effected the academic achievement of the learner were unavailable for study. All instruction involves some

form of communication--verbal and nonverbal. The role of nonverbal communication has not been well researched and there are many questions to be answered. Such gestures as head nodding, a message-modifying activity, are known to be culturally meaningful but this area of study has not been well developed (Sebeok, Hayes, and Bateson, 1964). The investigator did not control for nonverbal communication such as body motion and intonation of the voice. The investigation of the effect of nonverbal communication was omitted because the investigator felt that an entire area would have to be researched and lie beyond the scope of an initial study.

Shuy (1969) stated:

> The major differences between standard and nonstandard urban English are, in number, relatively few (when seen in relationship to the many points of similarity) and the speakers of nonstandard urban English who are of school age or older have the ability to produce standard forms in some or in some degree of frequency. . . . Even though nonstandard, seems to be not greatly separated from standard, the fact remains that these apparently slight differences carry tremendous social weight. . . . Linguists have been studying these matters from the viewpoints of the objective language phenomena, subjective reactions to language, what happens to the conflicting language system in contact, and how a person switches from one to the other. . . .

One major limitation in the investigation was the description and analysis of the investigator's code switching. During the instructional period, no expert was used to check the

switching of codes, i.e., switching from a sub-culturally appropriate language to standard language. Wolfram (1969) stated that no person is completely successful in switching from code to code.

Another limitation was the usefulness of the lexicon and instructional sequence for any speech-community. This material cannot be used for another speech-community without modification. But the method and techniques are the essential features. Time was also a factor--the complete study took more than two years to execute. Without the help of the Center for Applied Linguistics the study would have taken longer. To have done a detailed study would have been beyond the financial means of the researcher. In the next section conclusions of the investigation are given.

Conclusions

Support for the hypothesis that the use of a sub-culturally appropriate language has an effect upon achievement in an academic content was obtained. This support was based on the total score on assessment tasks, i.e., those subjects investigated with respect to a sub-culturally appropriate language exhibited the behavior of successfully completing more tasks than those subjects investigated with respect to a standard language. (See Figure 1, page 66.)

Although the hypothesis was supported, the investigator is unable to enumerate each contributing variable and describe to what degree each variable influenced the final results.

From these conclusions, implications and recommendations are made in the next section.

Implications and Recommendations For Further Study

The hypothesis that the use of a sub-culturally appropriate language has an effect upon achievement in an academic content was supported. For this particular speech-community the use of a sub-culturally appropriate language seemed to produce a differential effect upon achievement in mathematical content. The "why" and "what factors" questions have not been answered. Specific factors and variables that caused a sub-culturally appropriate language to have an effect upon achievement have not been isolated.

The total pool of variables had an effect upon achievement as described in the investigation. However, what role each variable played was not brought out. A possible listing of variables to be researched are (1) race of the investigator, (2) language and content background of the investigator, (3) body motion communication, (4) teaching style, (5) code switching, (6) teacher expectation, and (7) teacher bias.

The trend in the early education of young learners who have been labeled disadvantaged has been that of Bereiter and Engelmann (1966). The emphasis has been to change the behavior of the learner so that he is able to learn. As yet, no data have been presented to verify that this approach is a valid one. If the aim of the educator is to find where a child is and teach him accordingly, then teaching a new set of language patterns and behaviors before assessing how much the learner is already able to do is defeating this aim. It seems that a logical tactic would be that the educator attempt to learn the language patterns of the learner and converse with him. However, if the educators are to assume that any language system different from that which is "appropriate" for the classroom is nonstandard, vulgar, or wrong, then further research studies are useless. But, if the educators are willing to accept any language system as valid and work along with the sociolinguistics experts in language research, then the curriculum problems of the disadvantaged learner might be on the way towards solution.

The findings of this investigation were not dissected into integral parts. A desirable approach to further research would be to investigate combinations of variables and the roles of individual and clusters of variables. One finding for which research is needed was the inability of

the learner to adjust initially to a sub-culturally appropriate language in an instructional situation, i.e., the learners had to be reminded that they were in school. Do language patterns and sounds set the stage for reactions in a given environment? Although the learners were young, they had become conditioned to "standard" language and voice patterns of the teacher. Were the learners reflecting teacher expectation? That is, are the learners aware that the teachers do not talk the same way as they talk and do not teach them in their own language patterns? Therefore, teacher expectation is another variable which needs to be researched with respect to communication and instruction.

The fact that the investigator had little or no trouble with the instructional sequence cannot be contributed to any particular variables. A question of interest would be to study the investigator with respect to race, educational background, past experience, early childhood, relationship with and degree of involvement with large inner-cities school projects, linguistics awareness, and general concern and personality. In the past, other educators have attempted to work with the total school population and have been very unsuccessful; yet, the investigator worked with the total population for almost three years. The degree of success with the investigation might not lie

with the formal structure but with the complete setting. Any replication would have to be carefully planned and the researcher would have to be certain that he is attempting to reconstruct a method and not stage a play where all the lines and characters are already written.

The findings are rich with generators for further study. The following are some questions that might be researched:

1. Can language switching be effectively managed in the classroom by the teacher?

2. How prepared is the average classroom teacher to recognize and identify language patterns in different codes?

3. Can the variables of communication be identified and described as they relate and interact with each other?

4. Are the language patterns of the standard and nonstandard separate and distinct systematic language structures?

5. Do learners after three years in school choose to accept or reject the classroom atmosphere and language patterns?

6. Does teacher expectation help the advantaged and hinder the disadvantaged?

Similarly, there are some recommendations to be made to everyone who is involved in the educative process. The following are such recommendations:

1. Early childhood training projects such as Headstart and Follow Through should provide a teacher training program for sub-culturally

appropriate languages that the young learners use in their individual environments.

2. Each large inner-city school system should provide specific speech-community with language experts to construct instructional materials in sub-culturally appropriate languages.

3. Colleges of teacher training programs should provide adequate training in the teaching of content areas with respect to the many dialects of a language.

4. A sociolinguist should be employed by each school system where distinct speech-communities have been identified.

5. Evaluation should be made with materials constructed from sub-culturally appropriate languages.

Many sociolinguists assume that language, or a variety of a language, used by a given speech-community is adequate to meet the needs of its users relative to the demands of that community. They assume that children learn the language of their peer group, and that dialects, even nonstandard dialects, are systematic in nature.

Research seems to indicate that the linguist is the only person who is looking at the problem from an objective point of view. More and more, the researchers in inter-related fields are beginning to realize that all of them need to work together. Certainly, what has been done in the past has not been the answer. Urban problems are everyone's problems. A sub-culturally appropriate language may be an

answer for some of the difficulties encountered by students in different speech-communities. The research now suggests that a sub-culturally appropriate language does enhance academic achievement.

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APPENDIX A

A NOTE ON THE DEVELOPMENT OF A DICTIONARY FOR A GIVEN SPEECH-COMMUNITY

A NOTE ON THE DEVELOPMENT OF A DICTIONARY FOR A GIVEN SPEECH-COMMUNITY

A lexicon was one of the considerations in this investigation. The primary concern was not to make a collection of isolated words. The concern was to collect utterances from the informants in a given speech-community and attempt to compile a collection of systematic language patterns.

Over a period of two years the investigator made a collection of tapes and records of utterances of the informants in the speech-community of this investigation. From this collection of utterances a list was compiled of words that were used differently from "standard language." Each word was listed; a classification was made--noun, verb, adjective, etc., according to its use by the informant; a meaning was interpreted by the investigator; and examples of actual utterances and expressions by informants along with the investigator's translation were given. Similarly, a list was compiled of expressions that were used differently from "standard language." This collection was taken to the Center for Applied Linguistics and the entries were

further classified with respect to techniques used to describe the grammatical features of black dialect in Washington, D.C. (see Appendix B).

The purpose of this development was to have available a lexicon for the sub-culturally appropriate language used in the development of instructional and evaluative materials in this investigation. By no means did the investigator claim that this collection was complete. There were many factors and variables involved in the collecting of the entries; an attempt to account for and control all of them was not possible. Dr. Frederick Cassidy, President of the American Dictionary Association, in a speech at the University of Maryland in March, 1969, stated:

> . . . even with the use of computers the Dictionary of American Regional English will never be complete. People are constantly changing old expressions, creating new words, altering the phonology of the language and restructuring grammar. To my knowledge, the best work thus far with works of this sort is the Linguistic Atlas. . . .

The dictionary developed for a given speech-community is of limited scope and should be considered accordingly. The use of the dictionary itself is restricted--each speech-community has its own basic language patterns and the idiolectal patterns of its informants vary widely from those of other speech-communities--even within the same city. Patience and time are important factors for the researcher

who plans to develop a dictionary of his own for a given speech-community. The researcher must be able to "listen" to the informants--not merely hear them converse--and record utterances without altering them to fit some value scale that he has constructed.

APPENDIX B

SOME GRAMMATICAL FEATURES OF NEGRO DIALECT

Investigator's Note:

The instructional sequence and assessment tasks were constructed for the sub-culturally appropriate group using both language data collected in the given speech-community (by the investigator over a period of two years) and grammatical features as described by Fasold.

The investigator's language data included the word stock, sound patterns, and grammatical patterns of the informants. Whenever points of conflict were encountered the dominant ones were considered appropriate.

SOME GRAMMATICAL FEATURES OF NEGRO DIALECT

(Prepublication Version)

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Note: This paper is now in press under the title, Teaching Standard English in the Inner City, Ralph W. Fasold and Roger W. Shuy (eds.), Washington, D.C.: Center for Applied Linguistics. Permission to use the prepublication version was obtained from CAL.

SOME GRAMMATICAL FEATURES OF NEGRO DIALECT

Introduction

There are essentially three sources of information on the features of Negro dialect.[1] First, there are detailed technical linguistic analyses, like those of Labov et al. (1968), Wolfram (1969) and Fasold (forthcoming). Another source of information is in the form of lists which usually lack enough detail to be really useful and sometimes contain misinformation (Board of Education of the City of New York, 1967:5-15; McDavid, 1967; Baratz, 1969a, 1969b; Wolfram and Fasold, 1969; Southeastern Educational Laboratory, 1969: 13-15). A third source of information are articles in which Negro dialect features are mentioned incidentally as examples illustrating points being made (Stewart, 1964, 1966, 1967, 1968, 1969; Dillard, 1967, 1968). Our purpose here is to

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[1] We will assume throughout this article that the question of whether or not there is such a thing as "Negro dialect" distinct from white nonstandard dialects has been answered in the affirmative. For further discussion of this issue, see Stewart (1966, 1968, 1969) and Fasold and Wolfram (in preparation). The use here of the term "Negro dialect" is equivalent to my use of "Black English" elsewhere and approximately equivalent to the use of "Negro Non-Standard English" by others.

present the information currently available on the grammatical features of Negro dialect in non-technical language, but in sufficient detail to be useful, if not to teachers themselves, at least to those who would like to write teaching materials but do not feel secure in their knowledge of the features involved.

Before discussing the features themselves, it will be necessary to make clear a number of presuppositions. First, while we insist that Negro dialect is a linguistic system distinct from any other nonstandard English dialect, we do not deny that it shares many features with such dialects.[2] The distinctiveness of Negro dialect lies in certain features which it alone among English dialects has (some of these will be pointed out as we go along) and in the combination of grammatical features which occur in the dialect. Second, while it is true that very few people who are not Negroes speak Negro dialect,[3] it is far from true that all Negroes speak it. There are very many Negroes whose speech is totally indistinguishable from others of the same region

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[2] Of course, Negro dialect also shares a large part of its grammar with standard English as well.

[3] Research is now in progress to determine to what extent Negro dialect features are present in the English of Puerto Rican communities in American cities.

and social class and there are many more whose speech can be identified as "Negro" only by a few minor pronunciation features. Negro dialect, as the term is used here, is a nonstandard dialect associated with Negroes of lower socio-economic classes which includes a number of grammatical differences from standard American English, as well as pronunciation differences. Third, it is important to realize that Negro dialect is not an unworthy approximation of standard English. It is a fully-formed linguistic system in its own right with its own grammar rules. In several places, it is possible to make grammatical distinctions in Negro dialect which can only be made paraphrastically in standard English. Finally, part of the reason for the distinctness of Negro dialect stems from the fact that it has had a unique history. The linguistic history of the dialect is different from that of any other American dialect.[4]

Verbs

Many of the most significant features of Negro dialect are to be found in its verb system. The differences in the verb structure of Negro dialect and standard American English are to be found in the tense systems of the two

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[4]The details of that history can be found in Stewart (1966, 1967, 1968). A very brief summary is given in Wolfram and Fasold (1969).

dialects and their treatment of the verb to be.

The Third Person Singular Present Tense Marker

General. In standard American English the suffix -s (or es) is used to identify the present tense of a verb if the subject of that verb is in the third person singular. The paradigm is:

Singular	Plural
I walk	we walk
you walk	you walk
he walks; the man walks	they walk; the men walk

In a sense, the use of the -s suffix to mark present tense with third person singular subjects is an irregularity, since no suffix is used to mark present tense with other persons. The paradigm in Negro dialect is more regular:

Singular	Plural
I walk	we walk
you walk	you walk
he walk; the man walk	they walk; the men walk

It is important to realize that the -s suffix is not carelessly "left off" by speakers of Negro dialect. This suffix is simply not part of the grammar of the dialect.[5]

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[5]Those interested in the reasoning behind this conclusion should see Labov et al. (1968:164-167), Labov (1969: 59-60) and Wolfram (1969:135-141).

Auxiliary don't. The verb do is used as an auxiliary in negative and other kinds of sentences. In Negro dialect, the -s suffix is absent from auxiliary don't just as it is from other third person singular present tense verbs. The equivalent of the standard English sentence He doesn't go, then is He don't go. In other nonstandard dialects of English, the -s suffix is not absent from other verbs. Speakers of such dialects rarely or never use sentences like He walk, but frequently use such sentences as He don't walk. The use of don't for doesn't in Negro dialect does not apply only to auxiliary don't, but is part of a general pattern involving all present tense verbs with subjects in the third person singular.[6]

Have. The verb have in standard English is unique in that the combination of have and the -s suffix results in has rather than haves. Since the -s suffix does not exist in the verb system of Negro dialect, the verb remains have with third person singular subjects in the present tense. For

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[6]Teachers are sometimes doubly surprised when they hear sentences like He don't suppose to bring our books to class. Not only is the -s suffix absent from auxiliary don't but the presence of don't instead of a form of to be is strikingly different from standard English. In Negro dialect, the word is not the participle supposed, but is a verb suppose which functions grammatically like the verb intend, thus We don't suppose to bring--parallel with We don't intend to bring.

this reason, we observe sentences like He have a bike and He been there before, I know he have.

Hypercorrect forms. The absence of the -s suffix in Negro dialect causes a real language learning problem when Negro dialect speakers come in contact with standard English. They observe that speakers of standard English have a suffix -s on some present verbs. But the grammatical rules restricting its use to sentences with third person singular subjects is just like a rule in the grammar of a foreign language. Like a foreign language learner, Negro dialect speakers begin to use the feature, but do not restrict it according to the rules of the new dialect. The result is that the -s subject is sporadically used with present tense verbs with subjects other than third person singular. This accounts for sentences like I walks, you walks, the children walks, etc., as well as the appropriate standard English He walks. Occasionally, the suffix is also added to non-finite forms, giving sentences like They want to goes. No Negro dialect speakers, however, add the -s suffix to all present tense verbs with non-third person singular subjects.

The use of sentences like I walks has a quite different status from the use of sentences like He walk. A speaker of Negro dialect uses walk instead of walks with a subject like he because this is the correct form according to the

grammatical rules of his dialect. He uses walks with subjects like I, not because this grammar calls for this form but because of a partial learning of the grammar rules of a different dialect.[7]

Past Forms

The -ed suffix (verb bases ending in a consonant).

A superficially similar difference between Negro dialect and standard English is the absence of the -ed suffix in past time forms of verbs. There are sentences such as He miss a bus yesterday and He had miss it the day before. However, the absence of the -ed suffix for the past forms fits in the grammar differently than does the absence of the -s suffix on present tense verbs. In all varieties of English, the -ed suffix has three different phonetic forms depending on the phonological properties of the verb base to which it is affixed. If the verb base ends in d or t, -ed is pronounced something like id. If the base ends in any unvoiced consonant except t, the -ed suffix is pronounced t. When the verb base ends in a vowel or a voiced consonant except d, the pronunciation of -ed is d. The combination of the verb base ending in any consonant except d or t and -ed results in a

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[7] For a further discussion of hypercorrect forms, see Labov et al., op. cit., and Wolfram, op. cit.

consonant cluster with t or d as the second member. Thus the word rubbed ends in the consonant cluster bd in its spoken form and the word missed ends in the cluster st. In all varieties of English, it is permissable to omit the second member of such a cluster under certain circumstances. The sentence Yesterday I burned my hand is pronounced Yesterday I burn my hand in the speech of anyone but the most prissily overprecise. The basic rule is that the second member of such a cluster may be omitted if the following word begins with a consonant. If the next word begins with vowel, however, both members of the cluster must be pronounced in standard English. It is not permissable, therefore, to pronounce Yesterday I burned it as Yesterday I burn it. In Negro dialect, the pronunciation rules are slightly different from those of standard English. In Negro dialect, the second member of a consonant cluster at the end of a word must be eliminated if the next word begins with a consonant. If the next word begins with a vowel, it may be eliminated. The result is that the absence of the -ed suffix from a verb which ends in a consonant besides t or d is rarely noticed by speakers of standard English since the pronunciation rules of their dialect also allow its absence under these conditions. When the -ed suffix is absent from such verbal bases when the next word begins with a vowel, however, the missing

suffix is readily noticed. These observations have two important implications. First, the missing -ed suffix does not reflect a grammatical difference between Negro dialect and standard American English. The suffix is grammatically present. It is removed by pronunciation rules which differ only slightly (but with socially significant results) from the pronunciation rules of standard English. The second implication is that there is no necessity for teaching the overt pronunciation of the -ed suffix except when the next word begins with a vowel.[8]

The -ed suffix (verb bases ending in a vowel). It is also possible to observe sentences like Yesterday he play it and He had play it the day before. In this case, the -ed suffix is absent from a verb ending in a vowel. As mentioned above, the -ed suffix, when attached to such verbs, is phonetically represented by d in all varieties of English. There is another pronunciation rule in Negro dialect which allows word-final d to be eliminated. This rule operates on words like played to give play. However, the rule is much less frequently applied than the rule eliminating the second member of a consonant cluster. There are, then, many fewer

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[8]The final consonant cluster elimination rule and its grammatical implications are discussed in detail in Wolfram (1969:57-82), Labov et al. (1968:123-157), Labov (1969) and Fasold (1969).

cases of sentences like Yesterday he play it than of sentences like Yesterday he miss it. Again, the absence of the -ed suffix is the result of a pronunciation rule and the suffix is grammatically present.[9]

The -ed suffix (verb bases ending in t or d). In Negro dialect, the -ed suffix is absent from verbs ending in a vowel less often than for verbs ending in a consonant besides t or d. When a verb ends in one of these two consonants, the -ed suffix (pronounced id) is absent even less often and is absent only under certain restricted circumstances. A few verbs can be used with infinitive phrases or with nominalized verbs (He started crying, He wanted to go). When such verbs end in t or d (start, want, need, end up), and are used in one of these two constructions, the i of id may be deleted. The verb then ends in dd or td which is then simplified to d. These two operations are common to both standard English and Negro dialect and result in sentences like He stard crying and He wanda go. At this point, in Negro dialect either the consonant cluster simplification rule or the word-final d elimination rule can apply, giving

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[9]There is a related pronunciation rule which allows word-final d to be devoiced to t. If this rule operates, sentences like Yesterday he playt result. Wolfram (1969: 95-109) discusses the devoicing and elimination of word-final d in detail.

sentences like He sta crying and He en up coming.[10] In general, this is the only situation in which the -ed suffix can be absent from a verb ending in t or d.

Irregular verbs. Verbs which form their past tenses in an irregular way distinguish present and past forms in the overwhelming majority of cases in Negro dialect. The occurrence of sentences like Yesterday he give it to me are rare. However, some verbs which have irregular past forms in standard English have the same form for past and present tenses in Negro dialect. There are also such verbs in standard English (They hit him yesterday; They hit him every day). A few verbs, notably come and say, are classified with hit for some speakers of Negro dialect, giving, for example, He come every day; He come yesterday. In the case of say, the situation is complicated by the fact that some speakers who actually use said will be heard by speakers of standard English as having said say because the d of said has been removed by the word-final d elimination rule.

Perfective Constructions

Omission of forms of have. In standard American

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[10] These same verbs never lose the -ed suffix when they appear at the end of a clause. Sentences like He wanted to drive, but he couldn't get the car sta or That was what he need do not occur. r is absent in sta because of pronunciation rules in Negro dialect.

English, the present tense forms of auxiliary *have* can be contracted to *'ve* and *'s*, giving sentences like *I've been here for hours* and *He's gone home already*. In Negro dialect, these contractions can be removed, giving *I been here for hours* and *He gone home already*. Rules for removing the remnants of contraction account for at least three of the most-noticed features of Negro dialect, as we shall see. The frequent operation of this rule, together with the relatively infrequent use of the present perfective tense has led to the erroneous claim that *have* + past participle is not part of Negro dialect.[11] It is true that the present perfect tense is quite infrequent. But the past perfect construction with *had* is, if anything, even more common in Negro dialect narratives than in narratives by speakers of standard American English. Sentences like *He had found the money* appear strikingly often in story-telling. It is clear that the present perfect is selected less often and the past perfect more

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[11] Dillard (1967:8) and Loflin (forthcoming). For the opposite view, see Labov *et al*. (1968:221-228). In data supplied by Negro speakers in Washington, D.C. which currently under analysis in the Sociolinguistics Program of the Center for Applied Linguistics, it has been found that virtually no one had any difficulty supplying present tense forms of have (Auxiliary) with sentences like *He been there for hours*. when asked to match clipped sentences of the form *I know he* This was true regardless of the social class of the speaker and regardless of the presence of other Negro dialect features in his speech.

often than in standard English. As with the -ed suffix, pronunciation rules have removed forms which are present grammatically.

The past participle. While it is quite clear that the tense formed grammatically with have and had are part of Negro dialect, it is less clear whether or not there are past participles in its grammar. In standard English, most past participles are formed with the -ed suffix and so are identical with the past tense form. But there are a number of semi-regular and irregular verbs for which the past participle and past tense are formally distinguished (e.g., came versus has come; ate versus has eaten, etc.). In Negro dialect, however, it seems that there may not be any irregular verbs for which the past tense and past participle are distinct. Sometimes the standard English past participle form is generalized to serve both functions (He taken it; He have taken it), but more commonly the simple past form is used in both kinds of constructions (e.g., He came; He have came). For a few verbs, some Negro dialect speakers generalize one form while others generalize the other (e.g., He done it; He have done it; He did it; He have did it). It is possible, then, that the Negro dialect equivalents of the present and past perfect tenses are not formed with a form of have plus the past participle, but rather with a form of have plus

several past forms.

The completive aspect with done. Where standard American English has only two aspectual contrasts of the perfective type, Negro dialect has four. With standard English, Negro dialect has perfective tense (or aspect) constructions with have and had. In addition, Negro dialect has a completive construction and a remote time construction. The completive aspect is formed from the verb done plus a past form of the verb. Because of the uncertain status of the past participle in the grammar of the dialect, it is difficult to determine whether this form is the past participle or not. This construction occurs in sentences like I done tried hard all I know how and I done forgot what you call it.

The remote time construction with been. A similar construction with been indicates that the speaker conceives of the action as having taken place in the distant past. The remote aspect is used in I been had it there for about three of four years and You won't get your dues that you been paid. Often, the been construction is used with emphatic stress to doubly emphasize the total completion of an action.[12] Unlike the done construction, the been

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[12] It is not always used in this way, as has been claimed (Loflin, 1967). The two examples in this section are actual utterances which were spoken without emphatic stress.

construction is used only in Negro dialect. Both constructions are rather rare, at least in northern cities.

Future

Gonna. As in other dialects of English, very frequent future indicator in Negro dialect is the use of gonna. The rule for deleting is and are (see below) operates extremely frequently when gonna follows, giving sentences like He gonna go and You gonna get in trouble. So rarely is a form of be used with gonna that it may seem that gonna is not related to standard English be going to, but is an auxiliary in its own right. However, the behaviour of gonna as compared to true auxiliaries like can shows that this is not the case. In questions and in clipped sentences, can and gonna function quite differently (Can he go? but never Gonna he go?; He can sing, I know he can but He gonna vote for you, I know he is, not I know he gonna). The phonetic form of gonna can be reduced in a number of ways in Negro dialect which are different from its reductions in standard English. When the subject of the sentence is I in standard English, gonna can be reduced to ngna (I'ngna go). In Negro dialect, there are three reductions not possible in standard English, mana (I'mana go), mon (I'mon go) and ma (I'ma go). When the subject is something other than I, Negro dialect may have the

reduced form gon (He gon go).[13]

Will. The use of will to indicate future time reference is also part of both Negro dialect and standard English. As in the case of has and have, will can be contracted (to 'll). This contracted form, like 've and 's, can be eliminated, especially if the next word begins with a labial consonant, as in He miss you tomorrow. This makes it appear that the future is sometimes indicated by the use of the main verb alone.

Invariant Be

Will or would and be. Since be begins with a labial consonant, the 'll contraction of will is often absent before be. This is fairly common in Negro dialect, but also happens occasionally in standard English, giving sentences like He be here pretty soon. The contracted form of would is 'd, which can merge with the b or be or be removed by the final d elimination rule. This process is another source for invariant be and is quite common in standard English. A sentence like If you gave him a present, he be happy is possible in both dialects. Because invariant be from these two sources

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[13] Labov et al. (1968:250-253). It is difficult to indicate the pronunciations intended by the spellings mon and gon. The on in each case is to be taken as a nasalized o-like vowel (giving [mɔ̃] and [gɔ̃]).

occurs in standard English, its social significance for a speaker of Negro dialect is negligible.[14]

Distributive or non-tense be. The other source for invariant be is very different. This type of invariant be occurs because to be is possible in Negro dialect without tense specification with a meaning something like "object or event distributed intermittantly in time." This use of be, as in Sometime he be there and sometime he don't occurs only in Negro dialect and is usually misunderstood by standard English speakers. It is common for standard English speakers to take non-tense be as a deviant form of am, is, or are, when in fact it contrasts with these forms. To say I'm good is to assert a permanent quality of oneself. To say I be good means that the speaker is good only intermittantly. Unlike the cases of invariant be which are derived from will or would be, non-tense be usage is highly stigmatized socially. Because there are three sources for invariant be in Negro dialect, any positive statement containing

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[14] It may seem that an intolerable number of ambiguous sentences would result from the removal of the remnants of contraction. But the context usually makes the intended meaning clear. The same sort of thing happens in standard English, not only in the occasional removal of 'll and 'd, but in the contraction to 'd of both had and would. The sentence He'd come home is ambiguous by itself. But in contexts like He'd come home before I got there or He'd come home if he could the meaning is clear.

invariant be is potentially three-ways ambiguous. In the sentence If somebody hit him, Darryl be mad, if the use of be is taken as coming from would be, it is a hypothesis about how Darryl might act if he were hit. If will be is understood, it is a prediction as to how Darryl will react. If distributive be is the interpretation, it is a statement of Darryl's regular reaction to being hit. The sentence is only ambiguous because it is a positive statement. In negative sentences, contraction of will and would is not possible. The three interpretations above would each be denied in a different way. The hypothesis would be denied by Darryl wouldn't be mad, the prediction by Darryl won't be made and the statement by Darryl don't be made.[15]

Absence of Forms of To Be

When a present-tense form of to be is expected in standard English, Negro dialect may have no form at all, except when the subject is I, in which am or its contraction 'm is always present.[16] For most speakers of Negro dialect

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[15] Invariant be is discussed in detail in Fasold (forthcoming). For a discussion of my own and other views on this topic, see Wolfram (1969:180-197).

[16] In some parts of the South, and for a few young children in Northern cities, the -m is to be taken as part of the pronoun, so that the first person pronoun has two forms I and im. For these speakers, what sounds like I'm good has the I'm form of the first person pronoun and no

this absence of forms of to be represents the elimination of the contracted forms 's and 're much as the contracted forms of have, has, will and would are removed. Just as in these cases and in the case of the -ed suffix, the to be forms are grammatically present and are known to the speaker, but have been removed by a pronunciation rule. It is not necessary to teach the present tense forms of to be to speakers of Negro dialect, but they will need to learn to contract these forms without taking the further deletion step.

Is. As we have seen, the absence of is is common before gonna. Some other dialects of English besides Negro dialect show the absence of is in this context. In Negro dialect, unlike other English dialects, is can be absent wherever it would occur in standard English. We observe sentences like He a man, He running to school, That dude bad, as well as He gonna go. When the subject of a sentence is it, that, or what, and the next word is is, an s-sound is usually heard. This is not the 's from the contraction of is, however. The s in such sentences is the result of a following process. First, is is contracted to 's. Then, the t of it, that and what is transformed into s under the

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form of to be at all. Usually, however, it is safe to assume that I'm represents I plus the contraction of am.

influence of the 's from is. This leaves is's, thas's, and whas's. But these forms are never heard because the 's from is is then eliminated as it almost always must be when it follows a sibilant. This leaves the pronunciations iss, thas and whas for these three words. Apparently something similar happens in the case of let's (pronounced les) even though the 's comes from us rather than is (Labov, 1968a; Labov et al., 1968:180-181; Wolfram, 1969:210, fn. 18).

Are. The absence of are is more common than the absence of is both in the sense that it occurs more often in the speech of Negro dialect speakers and also in the sense that it occurs in other English dialects, some of them socially standard. The English contraction rule provides for the removal of all but the final consonant of certain auxiliaries (are to 're, will to 'll, have to 've, etc.). In dialects which lack r after vowels, are has no final consonant (i.e., it is pronounced ah). Applying the contraction rule to this pronunciation eliminates the word are entirely, without utilizing the Negro dialect rule for removing the consonant. Because of this there are speakers who have are absence but do not have is absence.[17]

[17] For further details, see Labov et al. (1968:174-221), Labov (1968a) and Wolfram (1969:165-180).

Agreement with forms of to be. Some speakers show no person-number agreement when full forms of to be are used. The past tense form is was regardless of the subject giving sentences like They was there, You was there, etc. When the full forms of the present tense form is used, is is used by these speakers for all persons, e.g., The boys is there, You is there, etc. However, some Southern speakers of Negro dialect use are or even am as the general form of the present tense of to be (There she are, You am a teacher, etc.) (Fasold and Wolfram in preparation.)

Negation

The Use of Ain't

Due to a series of phonetic changes in the history of English, the negative forms of is, are, am, and auxiliary have and has became ain't. Although ain't is used by educated speakers in casual conversation in some parts of the country, the use of ain't in this way is one of the clearest and universal markers of nonstandard speech of all kinds. In some varieties of Negro dialect, ain't also corresponds to standard English didn't. This probably developed from rather recent phonetic changes. In Negro dialect, negative forms of auxiliary do can lose the initial d in casual speech. This gives, for example, I 'on't know for standard English

I don't know. In the case of didn't, the second d can merge with the following n. The result of these two developments is the pronunciation int for didn't. This form is so similar in pronunciation and function to the already existing ain't that the two forms merged. For speakers of Negro dialect which have this use of ain't, there are sentences like He ain't do it as well as He ain't done it (or He ain't did it) and He ain't there. The unfamiliarity of this usage to speakers of standard English often leads to misunderstanding between speakers of the two dialects. A Negro dialect speaker may say He ain't touch me which should be translated as He didn't touch me in standard English but be understood as having meant He hasn't touched me (with the -ed suffix supplied by the hearer). Ain't is often used with multiple negation, leading to sentences like He ain't nobody, He ain't did nothing and He ain't go nowhere.

Multiple Negation

"Double" or multiple negation is another very common feature of nonstandard dialects. However, it has been shown (Shuy et al., 1967:Part III 7-23; Wolfram, 1969:152-164) that multiple negation appears occasionally in the speech of standard English speakers as well. Besides, there are various kinds of multiple negation, with unequal social consequences.

There are only certain places at which it is possible to add negative elements according to the grammatical rules of dialects which have multiple negation. Some adverbs, like hardly and scarcely, are inherently negative. Others, like ever and either, can be made negative by the addition of n (never, neither). The word not (or its contraction) can be added to a verb phrase (He didn't do it). Finally, no can be added to a noun phrase containing an indefinite element (nobody, nothing, no book). In standard English, the rule is that negation can be marked in only one of these ways in a single sentence.[18] Furthermore, if the noun phrase containing an indefinite precedes the verb phrase of the sentence, the negation must be marked in that noun phrase and all other indefinites in the sentence are indicated by the word any (Nobody did anything to anyone). If no indefinite appears before the verb phrase, not may be added to the verb phrase or a negative marker to the first indefinite (He didn't do anything to anyone, He did nothing to anyone). If there are no indefinites or negative adverbs in a sentence, the word not must be added to the main verb phrase (He can't do it). In Negro dialect, the rules are different.

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[18] Some detail is omitted in this sketch. A more complete discussion of multiple negation in various kinds of English appears in Klima (1964), Labov (1968b), and Wolfram (1969:152-164).

With negative adverbs. Perhaps the least stigmatized use of multiple negation is when negation is marked in both the main verb phrase and in the inherently negative adverb hardly.[19] Standard English speakers who never use other kinds of multiple negation, sometimes use sentences like He doesn't hardly come to see us any more, or more commonly He doesn't come to see us any more, hardly. In Negro dialect, the marking of negation in the verb phrase in sentences which contain hardly is the rule rather than the exception. Negro dialect, along with other nonstandard English dialects, also allows negation to be marked in the verb phrase when the same sentence contains the adverbs never and neither. The social consequences of this type of multiple negation is somewhat more severe than when hardly is involved.

With post-verbal indefinities. In sentences with indefinite noun phrases after the main verb phrase, standard English allows negation to be marked either in the verb phrase or in the first indefinies noun phrase (e.g., either He doesn't know anything or He knows nothing), but not both. Negro dialect, along with other nonstandard dialects allows negation to be marked both in the verb phrase and in each

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[19] The same is not true of scarcely because it is a formal word which is likely to be used only in those styles in which people take great pains to avoid all kinds of stigmatized forms.

indefinite noun phrase after the verb phrase. A sentence like He don't know nothing results from this grammatical fact. But there is a further grammatical rule in Negro dialect which requires that negation must be marked in the main verb phrase if it is also marked in a post-verbal indefinite noun phrase. Thus, while some Negro dialect speakers sometimes say He don't know anything, none will say He know nothing. If the word nothing is to be used after the verb, the word not must appear in the verb phrase. Thus the grammatical rule for negation in Negro dialect is no less strict than for standard English, but the two dialects allow and forbid different kinds of sentences. For some speakers of Negro dialect, as Labov and his associates point out (Labov et al., 1968:276-278), the grammatical rules of negation require that negation always be marked both in the main verb phrase and in every subsequent indefinite noun phrase. For these speakers, the sentence He don't know anything is violation of the rules of grammar, since negation is not marked in the word anything. The marking of negation in each post-verbal indefinite noun phrase leads to multiple rather than simply double negation in many sentences.[20] Because of this

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[20] It is clear that sentences containing multiple negation are understood as being negated only once, i.e., the negatives do not cancel each other out. Those who argue that

we find sentences like We an't never had no trouble about none of us pulling out no knife.

With pre-verbal indefinite noun phrases but not with the main verb. If the noun phrase which precedes the main verb of a sentence contains an indefinite, standard English requires that negation be marked here and nowhere else. In many nonstandard dialects, Negro dialect included, negation can be marked in such a pre-verbal noun phrase and also in post-verbal indefinite noun phrases and in negative adverbs. Sentences like Nobody never come and Nobody know nothing result.

With pre-verbal indefinite noun phrases and with the main verb. In Negro dialect, along with a few other non-standard dialects, negation is permitted in an indefinite noun phrase which precedes, the verb phrase and also in the verb phrase itself. This gives such sentences as Nobody don't know it. This sentence is the equivalent of the standard English Nobody knows it. The use of this type of multiple negation, unlike the other types, is likely to lead to actual misunderstandings by speakers of standard English

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sentences with double negatives are illogical because "two negatives make a positive" would have to admit that, although He don't know nothing is illogical, He don't know nothing about nothing, is not since it has an odd number of negatives.

who take the sentences like Nobody don't know it to mean something like Everybody knows it.[21]

Negativized auxiliary pre-position. If a sentence has an indefinite noun phrase containing a negative marker (nobody, nothing, no dog) before the verb, the negativized form of the verbal auxiliary (can't, wasn't, didn't) may be placed at the beginning of the sentence. The result is sentences like Can't nobody do it, Wasn't nothing wrong, and Didn't no dog bite him. Although these sentences appear to be questions in their written form, the intonation of the spoken form in Negro dialect makes it clear that they are statements. If the noun phrase before the verb does not contain a negativized indefinite, pre-position of the auxiliary is not possible, so that a sentence like Don't the man do it will not occur as a statement.

-s Suffixes

Possessive

With common nouns. Where the 's possessive appears in standard English, Negro dialect indicates possessive by

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[21] Labov (1968b, Labov et al., 1968:367) discusses another type of multiple negation, peculiar to Negro dialect, in which negation may be marked in the verb phrases of two different clauses. By this rule, sentences like Nobody didn't know it didn't rain meaning Nobody knew it rained are possible. But such sentences are extremely rare.

the order of the words. The phrase The boy hat corresponds to The boy's hat in the standard dialect. In Northern urban Negro dialect, apparently no one uses the zero form of the possessive exclusively; it alternates with the 's form.[22] In Southern varieties of Negro dialect it seems possible to find speakers who do not use 's for possessive at all (Fasold and Wolfram, in preparation). There is some reason to believe that the presence of the 's possessive suffix is more common at the end of a clause (i.e., in absolute position, as in The hat is the boy('s) than in the attributive possessive (The boy('s) hat). It has been claimed (Labov et al., loc. cit.) that the 's in this situation is "quite regular." However the absence of the 's suffix in the absolute possessive suffix have been observed with some frequency in the speech of Northern urban Negro dialect speakers and has been found to be extremely common in Southern Negro dialect data (Fasold and Wolfram, in preparation). Pedagogically, it would seem wise to deal with both kinds, but to emphasize

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[22]This is true in New York (Labov et al., 1968:169-170), Detroit (Wolfram, 1969:141-143) and of the data under analysis at the Center for Applied Linguistics for Washington, D.C. Labov and his associates claim (loc. cit.) that " . . . as a whole . . . NNE [Nonstandard Negro English] speakers do not use [possessive] 's." Nevertheless, his data show that the speakers he investigated do use the 's suffix in possessive constructions in a considerable number of cases.

the attributive construction.

With personal names. Because the position of the 's possessive somewhat unstable in the grammar of Negro dialect, some speakers use the 's suffix inappropriately with personal names when attempting to speak standard English. In standard English, of course, the rule is that the 's suffix is attached to the surname when the possessor is identified by his full name (Jack Johnson's car). Occasionally, a Negro dialect speaker will attach the 's suffix to both names (Jack's Johnson's car) or to the first name (Jack's Johnson car). This feature is not part of the grammar of Negro dialect but is a hypercorrection in attempting to use standard English (Cf. the hypercorrections in connection with the -s third person singular present tense marker on p. 3 [p. 87]).

Mines. Some speakers of Negro dialect use the form mines for mine in the absolute possessive construction (never in the attributive construction) giving sentences like this mines. This is a regularization in Negro dialect of the absolute possessive form of the first person pronoun to conform to the other pronoun forms which end in s (his, hers, its, yours, ours, theirs).

Undifferentiated pronouns. Some speakers of Negro dialect use the standard English nominative or accusative forms of personal pronouns for possession in attributive

constructions (he book, him book, we book, etc.). This feature, which is probably to be ascribed to the lingering influence of the grammar of Caribbean Creole languages in Negro dialect, is extremely rare in the North but apparently somewhat more common in the speech of young children in the South.

Plural

Absence of the plural suffix. The -s (or -es) suffixes which mark most plurals in standard English are occasionally absent in the speech of Negro dialect speakers. This results in sentences like He took five book and The other teacher, they'll yet at you. The absence of the plural suffix in Northern urban Negro dialect occurs considerably less often than the absence of the possessive suffix and far less than the absence of the third person singular present tense marker.[23] There is no question that most Northern speakers of Negro dialect have the use of the plural suffix as part of their grammar. Much of the absence of the plural suffix is due to a difference in the classification of certain nouns in Negro dialect from standard English. A few

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[23]This was true of studies in New York (Labov et al., 1968:160-164), Detroit (Wolfram, 1969:143-147) and Washington, D.C. Plural analysis of a segment of the Washington data was done by Sr. Carolyn Kessler, a student of mine at Georgetown University.

nouns do not take the plural suffix at all in standard English (one sheep, two sheep). Words which are so classified in Negro dialect but which take the regular -s plural in standard English include cent, year, and movie (Labov et al., 1968:163-164; Wolfram, 1969:145).[24] For some speakers of Southern Negro dialect, however, the plural suffix is almost always absent and may well not be part of the grammar of their dialect at all (Fasold and Wolfram, in preparation). The claim that the plural suffix may be absent when the plural noun is preceded by a quantifier (two, several, etc.), but not otherwise (Stewart, 1966:64) is not valid. There are a great many examples of plural nouns not preceded by a quantifier which lack the plural suffix.

Regular plurals with irregular nouns. Some nouns in standard English form their plurals by a vowel change (one foot, two feet), or with no suffix at all (one deer, two deer). For many Negro dialect speakers, these nouns take the regular -s suffix (two foots, two deers). This is another example of a classification difference between the two English dialects.

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[24] Wolfram (loc. cit.) contends that the absence of the suffix with nouns like cent and year is to be accounted for because the grammar of Negro dialect allows the optional absence of the plural marker with nouns of measure.

Double plurals. Where standard English forms plurals irregularly, Negro dialect may add the -s suffix to the irregular plural (peoples, childrens). A possible historical reason relates to an earlier stage of Negro dialect at which the plural category was not part of the grammar.[25] In learning standard English, speakers of the dialect tended to add the -s suffix to words which were already pluralized in an irregular way. These doubly pluralized words became fossilized and are preserved to the present. Words most frequently affected are childrens, peoples, and mens.

Questions

Inversion

The form which questions take in standard English depends on whether the question is direct or indirect. If the question is direct, word-order inversion takes place, but if the question is indirect, the basic word order is retained. Inversion affects the questioned element, if any, and the verbal auxiliary or copula, transferring them to the beginning of the sentence. The statement He went somewhere

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[25]This statement is not to be taken as implying that Negro dialect at this or any other stage is a cognitively deficient system. Many languages in which there is an abundance or philosophical and literary works, like Chinese, also lack plural as a grammatical category.

can be content-questioned or yes-no-questioned. To form the content question, somewhere is replaced by where, the auxiliary did is added and both are moved to the head of the sentence, giving Where did he go. The yes-no question simply requires the insertion of the auxiliary did and its transfer to the head of the sentence, giving Did he go somewhere. The indirect question involves the transfer of the questioned element to the head of the clause only. In the case of yes-no questions, if or whether is used in the construction. Examples of the two types of indirect questions corresponding to He went somewhere would be I want to know where he went and I want to know if (whether) he went somewhere. In the variety of Negro dialect spoken in the North, the inverted form of the question is used for both direct and indirect questions and the words if and whether are not used to form indirect yes-no questions. The direct questions for He went somewhere are the same as the standard English examples given above. But the two indirect questions would be I want to know where did he go and I want to know did he go somewhere. The Negro dialect grammar rules for question formation are more regular than the standard English rules, since they apply in the same way to both kinds of questions.[26]

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[26]There seems to be some evidence that this regularization is coming into standard English, since sentences

Some speakers, on the other hand, have the uninverted form for direct questions, at least in content questions. These speakers use questions like What that is and Where the white cat is.[27]

The Absence of Preposed Auxiliaries

In inverted direct questions, the auxiliary or copula from the main verb phrase is removed to the front of the sentence, as we have seen. In this position, some of these elements are especially vulnerable to deletion. This gives questions like He coming with us? (deletion of is), Where you been? (deletion of have) and You understand? (deletion of do). Although this is frequently cited as a feature of nonstandard dialects, deletion of these auxiliaries in direct questions is very common in spoken standard English. Therefore, attempting to eliminate this kind of auxiliary deletion from the speech of inner-city Negro children would be a low-priority task.

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like the last two examples are sometimes heard in the standard dialect.

[27] A historical process something like the following may explain this state of affairs. The uninverted construction is probably the older one. As Negro dialect began to approximate standard American English more closely its speakers noticed that the standard dialect had inverted direct questions. Since there was no distinction in Negro dialect between direct and indirect questions, inversion may have been generalized to both types.

Pronouns

A number of usages involving personal, demonstrative and relative pronouns are sometimes cited as examples of nonstandard dialect usage. We will discuss only two of them here.

Pronominal Apposition

A well-known, but little understood feature of non-standard English dialects including Negro dialect is a pronominal apposition. Pronominal apposition is the construction in which a pronoun is used in apposition to the noun subject of the sentence. Usually the nominative form of the pronoun is used as in My brother, he bigger than you or That teacher, she yell at the kids all the time. Occasionally, the objective or possessive pronoun is used in apposition as well, as in That girl name Wanda, I never did like her or Mr. Smith, I got one F in his class one time. It was discovered in a study of Detroit speech (Shuy et al., 1967:Part III, 23-38) that pronominal apposition was used by all speakers whether they were speakers of standard English or not. It seems likely that the length of the modifying material which intervenes between the noun and the pronoun has an effect on acceptability; the more intervening material, the more

acceptable the pronoun in apposition.[28] But the exact restrictions on the acceptable usage of pronominal apposition have yet to be discovered. Negro dialect speakers who use the stigmatized kinds of pronominal apposition do not use it in every sentence. It has been suggested (Walter A. Wolfram, personal communication) that the use of pronominal apposition is related to the entry and re-entry of participants in a narrative, but this hypothesis has not been investigated.

Existential It

Where standard English uses there in an existential or expletive function, Negro dialect has it. This results in sentences like It's a boy in my room name Robert and Is it a Main Street in this town? where standard English would have There's a boy . . . and Is there a Main Street . . . . This is a difference in the choice of a word in a single construction, but it affects the understanding of a considerable number of sentences in ordinary speech. For example, a television advertisement for a brand of powdered soup contained the line Is it soup yet? This was intended to mean

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[28] I once tested the sentence That man that I met on the train to Chicago last week, he turned out to be a congressman for acceptability with a class of university graduate students and none found it ungrammatical.

something like Has it become soup yet? and was no doubt so understood by the standard English speaking audience, except possibly in parts of the South. But speakers of Negro dialect would understand the same sentence as something like Is there any soup yet?

Conclusion

It should be clear from our approach to the features discussed here that we are not using the terms "grammar rule" and "pronunciation rule" in the traditional sense. As in the physical sciences, in which laws are discovered by observing natural phenomena and are not imposed on nature by scientists, so grammar rules and pronunciation rules are discovered by observing actual usage rather than taken as given and imposed on people's speech. For this reason, we can speak meaningfully of the grammar and pronunciation rules of a nonstandard dialect. For this reason also, some of the rules cited for standard American English will appear startling. In both cases, the rules were discovered from careful observation of usage. It is proper to refer to "rules" because in no speech (except possibly in the speech of the mentally ill) are words randomly put together. Negro dialect and other nonstandard linguistic systems operate under rules just as socially favored dialects do. But the

rules are different.

Because this is the nature of the rules of language, it is important to uphold real spoken standard English as a model to inner-city children rather than an artificially precise version based on someone's notion of what is "correct." As has been mentioned earlier, this will mean in particular that there will be no insistence that the -ed suffix be pronounced when the verbal base ends in a consonant which is not t or d and the next word begins with a consonant. The actual pronunciation of auxiliaries in inverted questions should be introduced late in the sequence of spoken standard English lessons and even then, should be lightly emphasized. In a similar way, it is not necessary to rigidly insist on the pronunciation of the contractions 'll and 'd before be. A teacher should also be proud of a job well done if he has succeeded in eliminating all forms of multiple negation from the speech of his pupils except with hardly. There are many other places where insistence on overprecision should be avoided. A good rule of thumb for a teacher to follow is to carefully and honestly reflect on his own usage in casual conversation and not to insist on any usage on the part of his pupils which he does not find in his own casual speech. Children, and perhaps especially Negro children, are quick to detect hypocrisy and will soon lose all motivation if

they see that they are being taught "better" English than their teacher actually uses himself.

The grammatical aspects of Negro dialect which have been outlined here are by no means the only ones which differ from standard American English. Yet, we have said something about all the most crucial features. Hopefully, an accurate understanding of some of the grammar of the dialect will contribute to the more efficient teaching of standard American English as an alternative way of speaking.

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APPENDIX C

INSTRUCTIONAL SEQUENCE

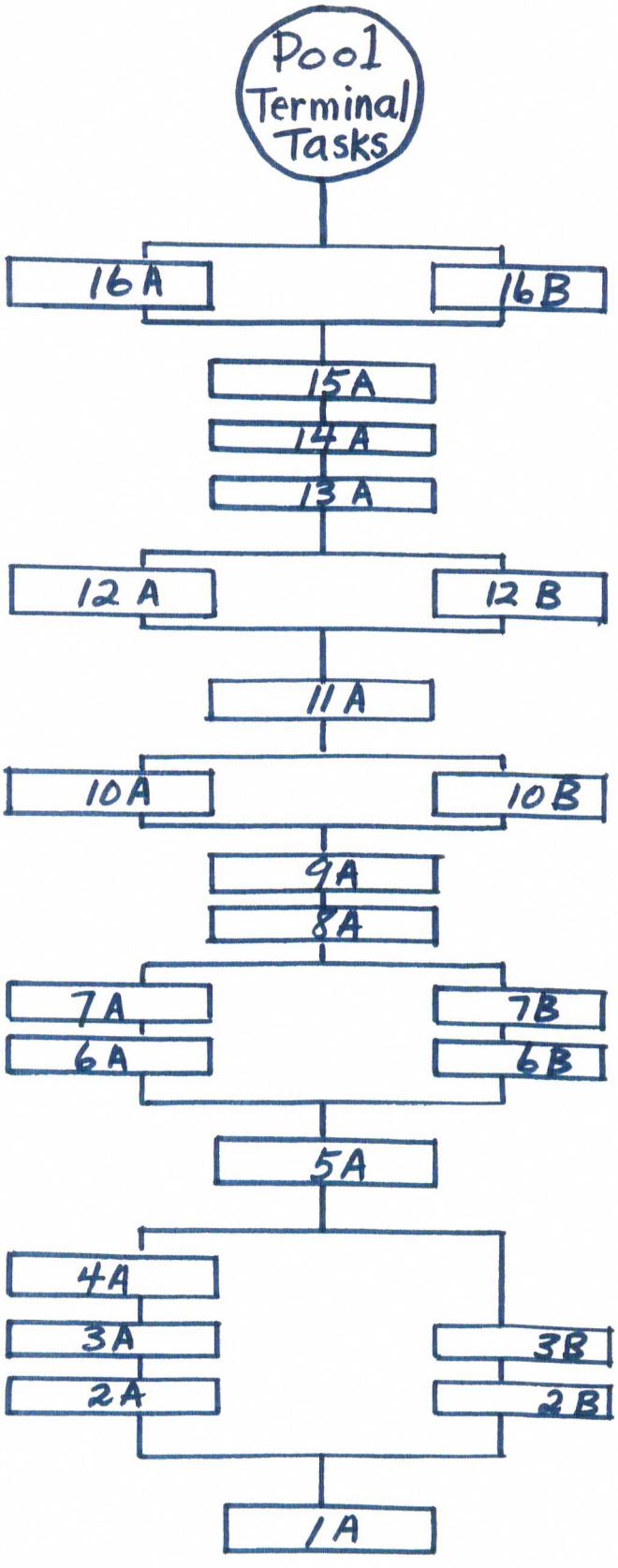


Fig. 2.--Schemat for instructional sequence.

TABLE 4

BEHAVIORS FOR LEARNERS IN INSTRUCTIONAL SEQUENCE

Level-Frame	Objective
1A	Identify familiar shapes by common names.
2A	Describe a particular shape in common terms.
2B	Given a particular shape, place a familiar shape with it.
3A	Select a particular shape and tell why it belongs to a certain class.
3B	Give the correct name for shapes using a commercial model.
4A	Distinguish classes of shapes from a collection.
5A	Name objects in a particular frame on a worksheet.
6A	Identify and name the picture which has the same shape as a model picture.
6B	Name an object in a particular frame on a worksheet and identify objects with the same shape.
7A	Construct a shape on the geo-board.
7B	Construct shapes from three-dimensional models via pipe cleaners.
8A	Classify constructions as rounded and/or with straight sides.
9A	On a worksheet, mark the rounded shapes blue and the straight-sided shapes red.
10A	Construct shapes on newsprint and give a verbal description.

TABLE 4--Continued

Level-Frame	Objective
10B	Given a verbal description, construct shapes.
11A	Give a definition of a simple closed curve.
12A	Identify shapes which are simple closed curves; if possible, name them.
12B	Distinguish between simple closed curves that are rounded and are straight-sided.
13A	On a worksheet, mark the circles green and all other rounded simple closed curves red.
14A	Examine straight-sided simple closed curves and describe their characteristics.
15A	Give a definition of a polygon.
16A	Classify polygons according to number of sides.
16B	Name polygons with respect to number of sides by number.

APPENDIX D

PANEL JUDGMENT FOR PARALLELISM OF LEARNING SEQUENCE TASKS

TABLE 5

PANEL JUDGMENT FOR PARALLELISM OF LEARNING SEQUENCE TASKS

Judge	I	II	III
1A	x	x	x
2A	x	x	x
2B	x	x	x
3A	x	x	x
3B	x	x	x
4A	x	x	o
5A	x	x	x
6A	x	x	x
6B	x	x	x
7A	o	x	x
8A	o	x	x
9A	x	x	x
10A	x	x	o
10B	x	x	x
11A	x	o	x
12A	x	x	x
13A	x	x	x
14A	x	x	x
15A	x	x	x
16A	x	o	x
16B	x	x	o
Agreement	91%	91%	87%

x: Agreement
o: Disagreement

APPENDIX E

DAILY LESSONS AND LOG OF DAILY LESSONS

DAILY LESSONS AND LOG OF DAILY LESSONS

For each of the objectives in the instructional sequence, an instructional task was written. A description of what the learner and investigator were expected to do was constructed for each instructional task. Hints were provided whenever the instructional task needed further explanation. The instructional tasks were given in outline form and the investigator employed the appropriate language and techniques for teaching the individual lessons. A log of daily lessons for each group was taken and is presented following the instructional tasks for a given day.

October 28, 1969 — 9:30 a.m. Standard Language; 10:30 a.m. Sub-culturally Appropriate Language

1A The investigator holds up an item and asks the learners to tell her what they call the item, i.e., to tell what name they call the item, not what the item looks like.

Note: The investigator talks and pauses for appropriate answers and free discussion.

2A The investigator asks the learners to take something from a box and to tell all that they can about the selected object.

Note: The investigator allows enough time for the learners to observe the object carefully and to describe its characteristics. If a learner isn't too sure, the investigator supplies the appropriate cues, e.g., "Is it long and flat?", "Does it roll?", "Does it have a top and a bottom?", etc.

2B The investigator shows a shape to the learners. The learners are asked to look at and pick up the shape, turn the shape over, touch the shape, and place the shape on the table. Next, the learners are asked to look in a box, find a shape that looks like the one on the table, and put the shapes next to each other.

3A The investigator holds up a kleenex box and explains

that the kleenex box looks like all the other boxes on the table--some boxes are little, some boxes are green, some boxes have tops, etc. The investigator asks the subjects to explain why the kleenex box is called a box and to tell as much as they can about the kleenex box. Note: The kleenex box was selected because, generally, children hear and say kleenex box. The investigator continues to ask questions until she is satisfied that the learners have given enough characteristics so that they could place the kleenex box with a set of boxes. If there is some doubt, another item can be selected and the exercise repeated.

Log Standard Language Group. The subjects were excited about guessing the names of shapes. Initially, the subjects (most of whom are nonreaders) did not tell what the shapes were called but named the shapes by their trade names, e.g., Hawaiian Punch. If one rereads the original question carefully, these answers would be correct. The learners were asked to tell what they called the items in terms of a name. However, when the labels were removed from the different shapes, answers referred to the shapes themselves, e.g., a can, a box, a bottle, etc. The investigator picked up several cans

without labels and the learners immediately said, "can." No matter what basic shape the container had, it was a can. But when a can with a label was held up, a mixed chorus of "can" and "Hawaiian Punch" was heard. One coffee can had a removable top. When asked what it was, several answers were given: top, "lead" (lid), head, etc. Several of the learners attempted to name the shapes by smelling the containers and naming the item that came in the container, e.g., "It smells like perfume--a perfume box"; "It smells like pills--a pill box"; "It smells like candy--a candy box." The descriptions were very rich--"It round." "Long and skinny." "Teeny flat box." "It 'em roll." "A little skinny box." A boy, when asked if a triangular shaped box could roll, said, "No." When asked why, he said, "'Cause it ain't got no wheels." When asked to repeat why he said what he did, he replied, "'Cause it don't got no wheels." Here, the investigator feels that the learner thought that she was correcting his English and attempted to correct himself by substituting "don't" for "ain't." Although the substitution was made, the sentence basically remained the same. (See Appendix B for a discussion of the grammatical features of a dialect.)

Sub-culturally Appropriate Language Group. The learners were curious about what they were supposed to do with the new teacher. Several of the learners wanted to see how the tape recorder operated. The investigator began the lesson using a sub-culturally appropriate language. Initially, the learners looked and did not react at all. After a few moments of discussion, the learners began to act and participate freely. It seemed as if all of them wanted to say something and do something at the same time. When asked what they called specific shapes, these learners, too, wanted to call the shapes by their trade names. (In between classes, the investigator had selected some shapes whose labels were unfamiliar to the learners and whose labels had words too difficult to read.) For these shapes, the learners began to guess and smell the containers. The investigator wanted to observe if this group of learners would also smell to identify what a shape was by what the container might have originally contained. (This is a fact not known by the investigator.) These learners also gave the shapes names with respect to the item that had that odor, e.g., a soap box, a candy can, a pill box, etc. The selecting of similar shapes created a problem because there was no agreement set to what characteristics we

were looking for to line up the similar shapes. Indirectly, the learners arrived at an important point: shapes are classified with respect to some particular characteristics. After a discussion about tops, edges, rims, etc., the investigator asked about a kleenex box. One learner immediately said that it was not a kleenex box but a tissue box! The investigator took this opportunity to attempt to explain that sometimes an object can be called by more than one name. The investigator took a tissue (kleenex) out of her purse and asked what it was. A mixed chorus of "tissue" and "kleenex" was heard. Two learners, one who called it a "tissue" and another who called it a "kleenex" came up and examined the object. After a brief discussion, the learners agreed that they saw the same characteristics. (If the group had been an intact class and not in an experiment, the teacher would have prepared a lesson with items and trade names for the class.) After several pairings off of similar shapes, the learners attempted to tell why a coffee tin belonged to a set of cans. A rich array of descriptions were given: "It roll." "You kin put things in it." "It'er hold water." "It ain't got no sides." "Round like a circle." "It look like a can--you know, beans."

October 29, 1969 — 9:30 a.m. Sub-culturally Appropriate Language; 10:30 a.m. Standard Language

3B The investigator asks the learners to place all like shapes in a pile. (The investigator places an appropriate commercial shape in front of each pile.) Pointing to the shape in front of a particular pile, the investigator names the shape and asks the learners if all the shapes in the pile are called by that name. The learners are asked to put all of a specific shape in a big box.

4A The investigator mixes up all the shapes and asks the learners to put all of the shapes on the table and to pick out first a specific shape. Then a learner picks out two more specific shapes.

5A Investigator points to a particular frame on a worksheet and asks the learners to give the names of the indicated shapes.

6A The investigator asks the learners to show pictures on their worksheets that have the same shape as the picture that she is holding.

6B The investigator points to each shape on a worksheet and asks the learners to name each shape and to show other things in the room that have the same shape.

Log Sub-culturally Appropriate Language Group. Second day. The learners came in excited and engaged in conversations with each other. It took several minutes for the learners to get settled and the lesson to begin. One learner had gone to the set of shapes and taken the shapes out. He piled all of the shapes with labels that he couldn't read nor had seen before in a huge heap. He wanted to know what they were. A girl asked, "How come you got all this stuff?" Since the learners were interested in these different labels, this set was used as the universal set for tasks 3B and 4A. The learners were asked to place all like shapes in a pile and commercial shapes were placed in front of each pile. A brief interchange was carried out so that the right names were tagged on the right items. The learners had to be constantly reminded that the labels were not the important factor. All the shapes were dumped into a large box and "messed-up" and as the investigator called out an item with respect to shape characteristics, a learner correctly identified it by picking it up. The learners named an object on a worksheet--no labels were given--only the basic shape. One learner noticed other shapes in the room that looked like one of the pictures. This event led into the next task. Objects not in the

room were named that looked like the picture. One little boy said out loudly, "This mine, I gonna take it home and see how much I can see, can I teacher?" So he took one picture with him. Also, about seven other learners took something home with them.

Standard Language Group. Second day. The subjects came in and began to handle the shapes and perform some of the tasks that were done on the previous day. In the assortment of cans there were several large coffee tins with tops. A couple of the boys began to beat them as if they were drums. In the midst of selecting and testing out the tins to get the right ones (the ones that sounded most like a real drum) the boys were giving description, i.e., desirable properties. Immediately, the investigator saw a chance to review the last task from the previous day. Then, the boys were asked to describe the different tins and explain why some were better than others for use as drums. After a brief discussion, the learners concluded that all the coffee tins had some basic characteristics. Hence, they could call them "cans." But there were other characteristics that made cans different. Again, as on yesterday, the learners were aware that the usage of a can determined

some of its features. Although the coffee tins had labels which could not be removed, not a single learner called the coffee tins by trade names, e.g., Maxwell House, Nescafe, Sanka, etc. But, again, some learners referred to other shapes with respect to commercial names, e.g., Donald Duck Orange Juice, Hawaiian Punch, Safeway Eggs, etc. The commercial models (a set of different shapes made from wood) were used and the learners were given the names with respect to the distinguishing features. The learners were allowed to feel the models and the features were pointed to and described. All the shapes, the set of commercial models and the set of randomly selected models, were mixed-up. A learner put all of the shapes on the table. When asked to pick out a triangle, one learner carefully sorted through the pile and came up with the exact commercial model the investigator used for demonstration. Another learner picked out shapes that had an edge. A discussion was held to match an object with its distinguishing features. The investigator treated the situation as an <u>if, and only if</u> statement, e.g., given a shape called a triangle, we know it has certain features. Given a description of a triangle, we are able to name it. (The following was not on the original outline.)

The investigator played a game: A description of a shape was given. The learner could not see the shape which was in a big box. After the description was repeated, the investigator said, "What am I?" Next, the investigator said, "I am a square; can you describe me?" The learner attempted to tell all distinguishing features of a square. The activity was enjoyed by all the learners. After the if, and only if exercise, the learners had little trouble identifying and naming shapes.

October 30, 1969

9:30 a.m. Standard Language
10:30 a.m. Sub-culturally Appropriate Language

7A The investigator asks the learners to make any shape.

Note: The learner is given a geo-board and a set of colored rubber bands. A demonstration of shape construction is given by the investigator.

7B The investigator asks the learners to make any shape.

Note: The investigator demonstrates how to make shapes via pipe cleaners and observes carefully the performance of each learner. After the learner constructs his shape, the investigator views it. If the shape is a

close approximation of the model, a piece of scotch tape secures it. If the shape is not close enough to the model, the learner is asked to repeat the task. If needed, another demonstration is given.

8A The investigator asks the learner to put all shapes with straight edges in a box and all the shapes which are rounded in a bag.

Note: The investigator shows a model of a shape which has only straight sides, one that is rounded only, and one that has a combination of both. The learner is given an opportunity to classify shapes with respect to straight sides and/or rounded.

9A Task omitted.

10A The investigator asks the learner to construct and tell about any shape of his choice.

Note: The investigator initiates the questions: "Could you cut your shape? Does your shape have sides? Is your shape a can?", etc.

10B The investigator describes a shape and the learners are asked to draw that shape on paper.

Note: Each learner is given a piece of newsprint and crayon.

Log Standard Language Group. Third day. The learners were given square geo-boards and a set of colored rubber bands. Only two learners out of the twenty had not worked with the geo-board before. After a few attempts, most of the learners demonstrated the ability to make a shape. When the investigator held up a handful of pipe cleaners and asked, "What are these?" none of the learners knew what the pipe cleaners were or what they were used for. A brief discussion followed about the use of them. Only one learner's father smoked a pipe. After a demonstration of how to construct a shape and secure it, each learner was allowed to select his favorite color. A box of solids was passed around and the learner picked his favorite shape. One learner collected all the shapes and placed them in a box. Another learner separated the shapes with straight sides from those that were rounded. Someone had constructed a shape that had straight sides and also rounded. Then the investigator showed an example of each type: rounded, straight-sided, and a combination of the two. The learners classified the shapes. Each learner was given a piece of crayon and newsprint. The learner made any shape that he wanted to make. When the learners were asked to talk about their shapes,

some of them turned the paper over and made shapes like ones discussed. The descriptions were not direct; most of them were comparisons. The investigator described a shape and the learners attempted to draw it. The direct descriptions were closely approximated. But the approximated descriptions which were new or nonconventional drew blanks. The learners were more concerned and interested in the shapes that they constructed on their own than those that they were asked to make.

Sub-culturally Appropriate Language Group. Third day. Each learner was given a geo-board and colored rubber bands. The learners wanted to know what to make. When the investigator said, "Do your own thing" all the learners laughed and noisily started to talk. The investigator called the class to attention in the regular school voice and language. (A further discussion of this observation was made in Chapter V.) Different constructions were made. No one was able to identify a pipe cleaner. A brief discussion followed about pipes and pipe cleaners. None of the fathers smoked a pipe. A demonstration how to construct shapes via pipe cleaners was given. Each learner selected his favorite color and model. Shapes were made and the investigator

secured the ends. Two more different shapes were made and all of the shapes were placed in a large box. A model of a shape with straight sides was shown and discussed. Similarly, a rounded shape and combination shapes were discussed. The assorting of shapes was successful. Each learner was given a piece of newsprint and asked to make a shape. After the construction, the learners were asked to describe their shapes. A brief discussion followed about conventional shapes and those that we could make up. If one made up a shape and someone else could not see it, one ought to be able to describe the made-up shape in terms of characteristics known to his partner. Briefly, the learners made up crazy shapes and told stories about them. They thought it was fun to do. The investigator gave a simple description and the learners attempted to construct the described shape. Most of the learners successfully constructed the shape. The investigator described another shape in words that the learners did not understand and confusion took place. At that time, the investigator reminded the learners that it was unfair to use description that all of them did not know. It was hoped that a lesson on fair communication was

taught. Time ran out and the lesson was over. A most enjoyable lesson.

November 3, 1969 9:30 a.m. Sub-culturally Appropriate Language
10:30 a.m. Standard Language

11A A definition of simple closed curve is desired. The particular group dictates the approach. The log reflects the instruction.

12A The investigator asks the learners to pick out all the simple closed curves in a box and to give the names of those that have names. The investigator puts the simple closed curves back in the box and asks the learners to repeat the exercise.

Note: Using shapes from previous exercises, the learners identify by pointing to, picking out, tracing the curve with fingers, etc. all the simple closed curves. The investigator asks the learners to name those curves that have names. If the learners have trouble, the exercise for defining simple closed curves is repeated.

12B The investigator exhibits a set of simple closed curves and asks the learners to put those simple closed curves

which are rounded in a specific basket and those which are straight-sided in another basket.

Note: The investigator questions the learners and repeates the exercise until she is satisfied.

13A The investigator asks the learner to mark on a work-sheet of simple closed curves all circles green and all other rounded simple closed curves red. A verification of why certain simple closed curves are marked and why some other simple closed curves are not marked is asked of the learner.

Log Both the Standard Language and Sub-culturally Appropriate Groups were given the instructions in the appropriate language. Fourth day. Two piles of rope were placed on the floor. One pile contained pieces of cut ropes. The other pile had pieces of rope that were taped to form closed paths. Two learners were chosen to be partners. One group of partners stood in front of each pile. One partner picked up a rope and placed it in any position he chose. The other partner picked up a set of footprint cutouts. As a learner walked on his rope, his partner crawled behind him placing the cutouts on the rope. All the different possibilities were examined and discussed. The learners identified

those ropes that crossed themselves and those ropes that did not cross themselves. Some of the learners initially did not want to put one cutout over another. Hence, if the rope crossed itself, only one cutout was placed. The learners next picked out the crossed ropes that were closed curves. Then the learners picked out the closed ropes that did not cross themselves. Several problems were carried through and the name "simple closed curve" was tagged to the appropriate ropes. Two hula hoops were placed on the floor. (This was again an example of a simple closed curve.) A discussion followed and a definition of a simple closed curve was developed. The learners were asked to pick out all the simple closed curves and attempt to name them when possible. The set was mixed up and the exercise repeated. There was not much difficulty with identifying and naming a simple closed curve. The learners further classified simple closed curves that were straight-sided and those that were rounded. This classification was extended to the picking out of shapes that were circles or rounded noncircular simple closed curves.

November 4, 1969 9:30 a.m. Standard Language
10:30 a.m. Sub-culturally Appropriate Language

14A The investigator asks the learners to look at simple closed curves with straight sides and to describe them.

Note: The learners are urged to discuss freely their descriptions. The investigator asks such questions as, "Do they look the same? Do they have corners? What about roundness?"

15A Using the curves from previous exercises, a story about Polly Parrot and a huge gong is told by the investigator.

Note: To illustrate the conditions for a polygon, the investigator gives a countdown: four--it is a curve; three--it is a closed curve; two--it is a simple closed curve; one--it has all straight sides.

16A The investigator asks the learners to count the sides in each polygon and classify them according to the number of sides.

Note: An activity of placing polygons in pockets that have the same number written on them as there are sides in the polygons is given with this lesson.

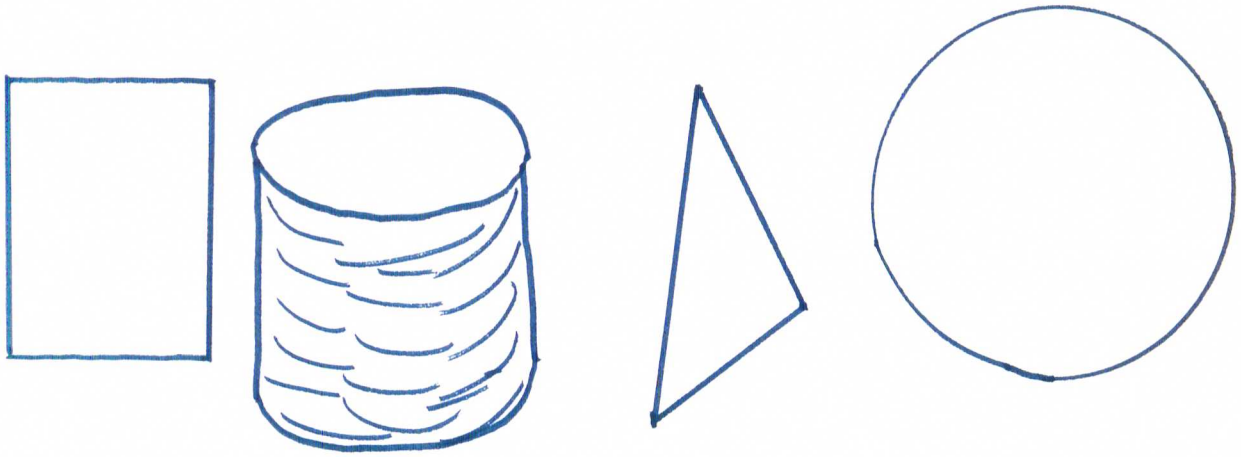
16B The investigator asks the learner to name a specific polygon with respect to the number of sides.

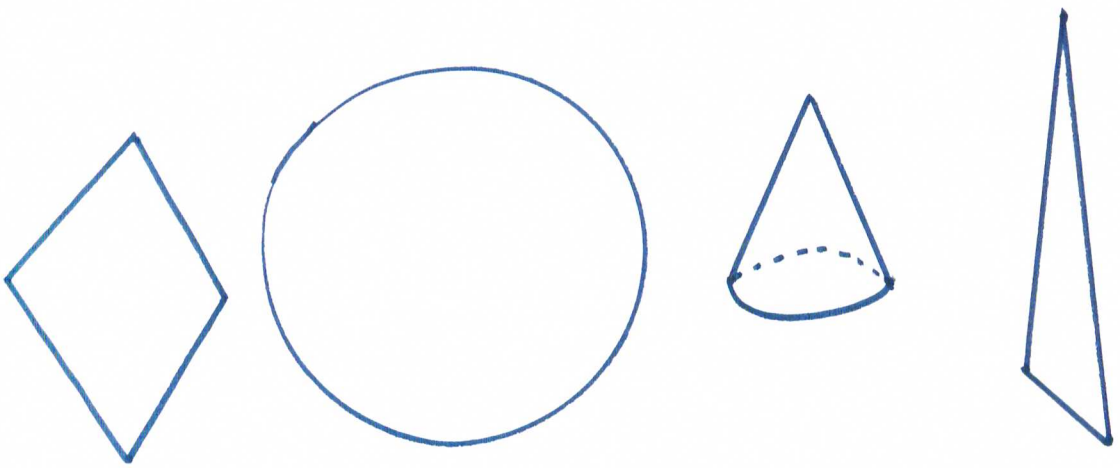
Log Both the Standard Language and Sub-culturally Appropriate Language Groups were given the instructions in the appropriate language. Fifth day. The learners carefully examined the simple closed curves that only had straight sides and described them. Some of the descriptions were comparisons. Next, a little story about Polly Parrot and a huge gong was told to illustrate and provide a mnemonic device for the word polygon. The learners enjoyed the story and several examples were given to illustrate polygons. The counting of sides of polygons and the placing of them in the appropriate pockets was an enjoyable exercise. After the selection was over the learners participated in an open discussion. A conclusion was reached--a polygon could not have less than three sides. A set of polygons was placed on the table. Each of these polygons had two or more features. When the learner was asked, for example, "Name the polygon with four sides," the learner answered, "The big purple pipe cleaner is a polygon with four sides." A quick review followed on some of the things that had been discussed, mainly definitions, descriptions, and identifications.

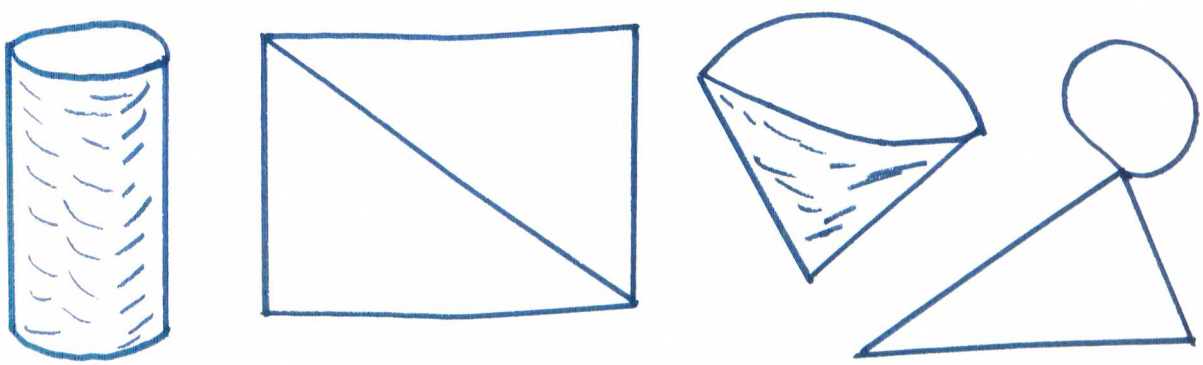
APPENDIX F

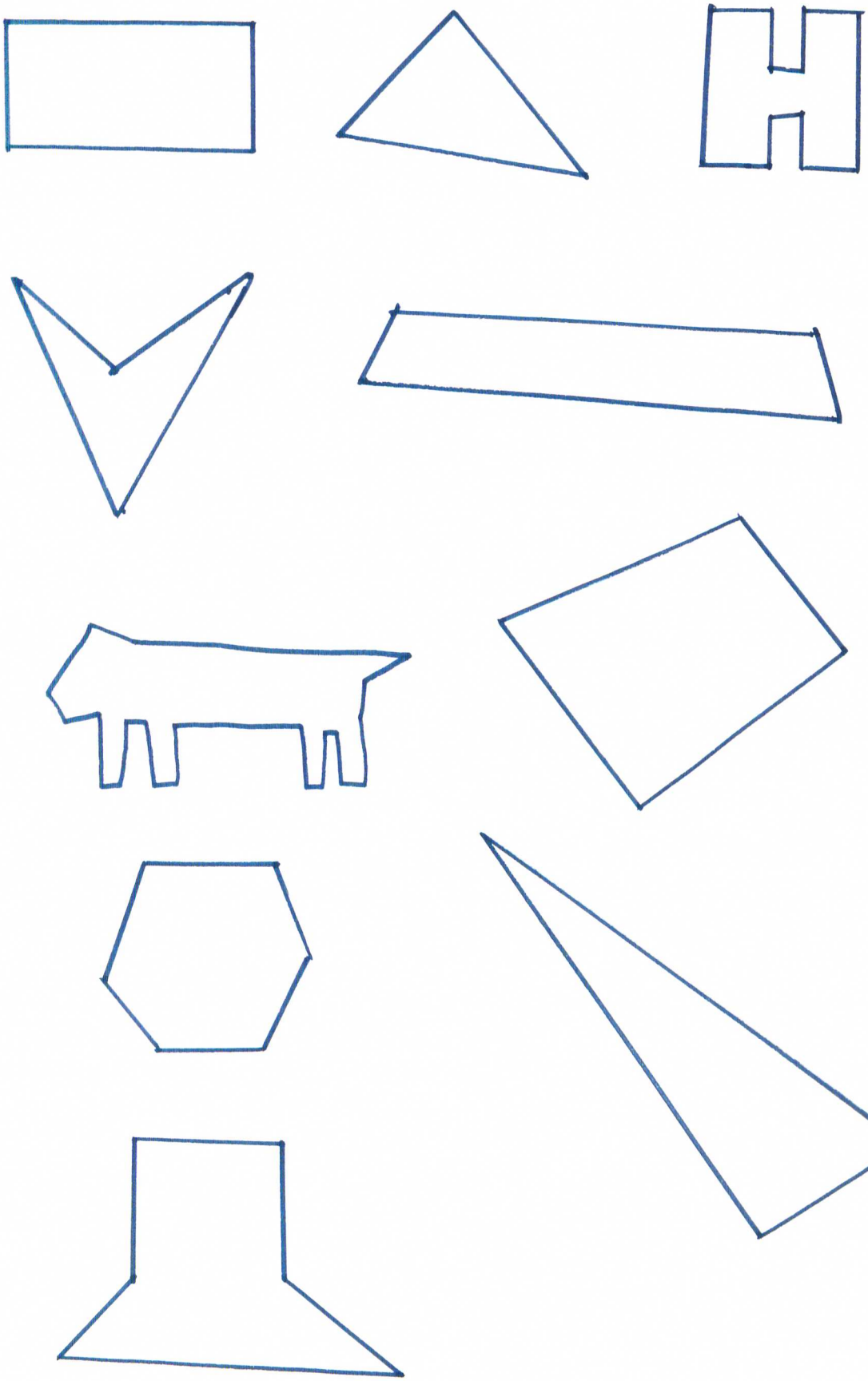
SAMPLES OF WORKSHEETS AND THE INSTRUCTIONAL TASK INDICATED

Worksheet for Task 5A: Name objects in a particular frame on a worksheet.









Worksheet for Task 13A: On a worksheet, mark the circles green and all other rounded simple closed curves red.

APPENDIX G

ASSESSMENT TASKS

ASSESSMENT TASKS

The investigator assessed both groups of learners with respect to the appropriate language. An attempt was made during the assessment period to place emphasis on interaction between investigator and each learner. The investigator moved from learner to learner to verify that directions were being interpreted correctly. The learner was given either one or zero for each assessment task response. All partially correct responses were considered incorrect. A test booklet and a copy of the instructions are presented in this appendix.

The investigator gives each learner a booklet and a piece of crayon (the large jumbo size for young children) and cautions each learner to listen carefully to all directions and questions. (Each question is read several times and the correct frame is verified for each question.)

Item 1. The learner is asked to look carefully at the first frame. (After the investigator verifies with all learners that they have the correct frame, directions are given.) The learner is asked to put a mark on the shapes that are simple closed curves.

Item 2. The learner is asked to look carefully at frame 2 and to draw a ring around the shape that does not belong to the pile of like things.

Item 3. The learner is asked to look carefully at frame 3 and to put a mark on the polygons.

Item 4. The learner is asked to look carefully at frame 4 and to (1) put a mark anywhere on the curve, and (2) put a dot inside the curve.

Item 5. The learner is asked to look carefully at frame 5 and to put a mark on the shape that is different.

Item 6. The learner is asked to look carefully at frame 6 and to put a mark on the shape that is described to

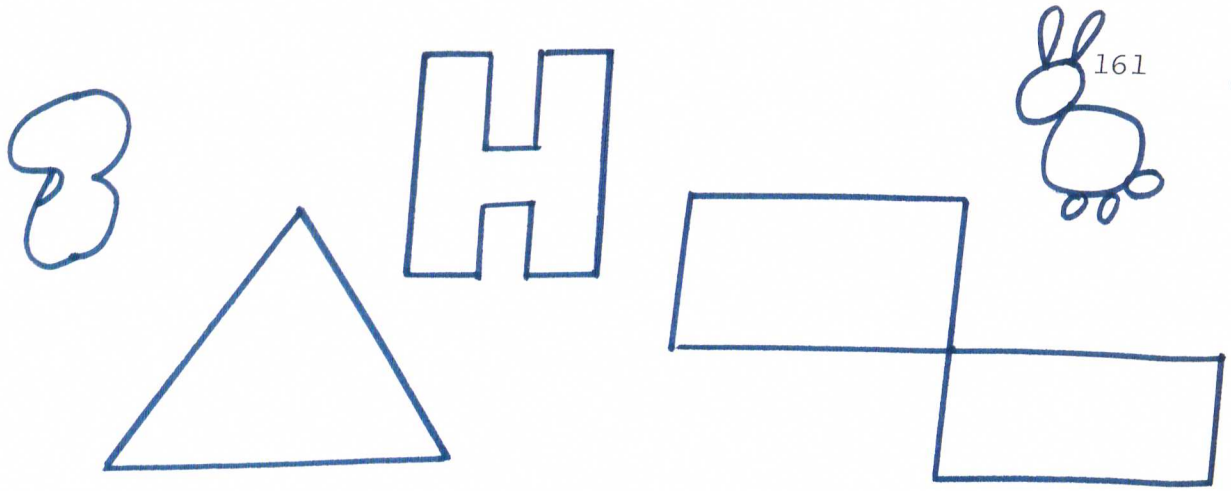
him: "It has edges, faces, a top, a bottom, and four sides."

Item 7. The learner is asked to look carefully at frame 7 and to listen to a description: "A pentagon is a polygon with five sides." (This description is repeated.) The learner is asked to put a mark on the pentagon.

Item 8. The learner is asked to look carefully at frame 8 and to listen to a description: "The convex polygon in this frame is that polygon that has a special name." (Repeat.) The learner is asked to put a mark on the convex polygon.

Item 9. The learner is asked to look carefully at frame 9 and draw a cylinder in the space.

1



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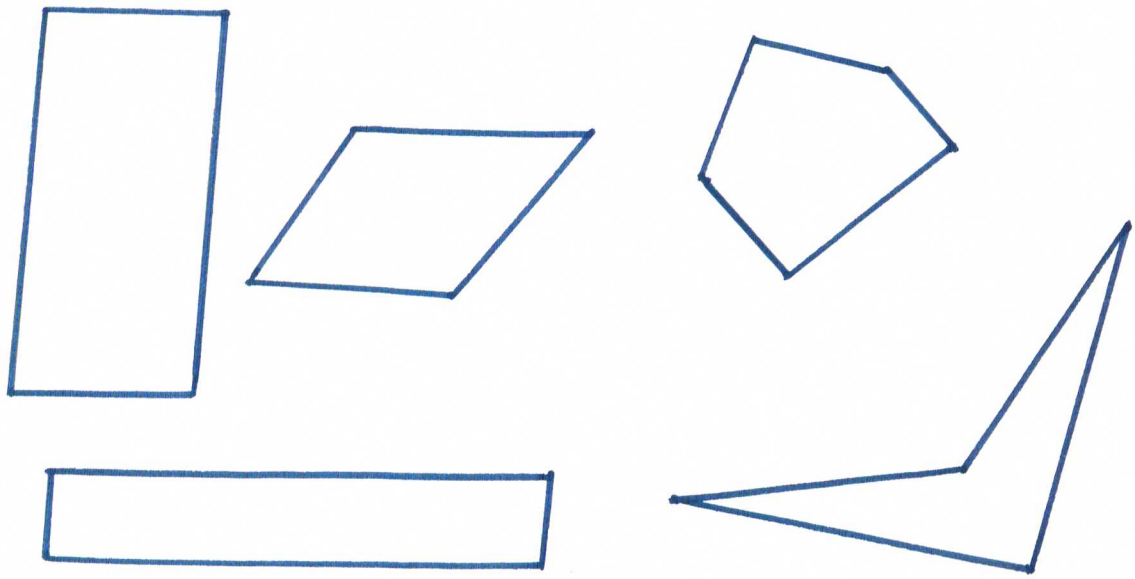

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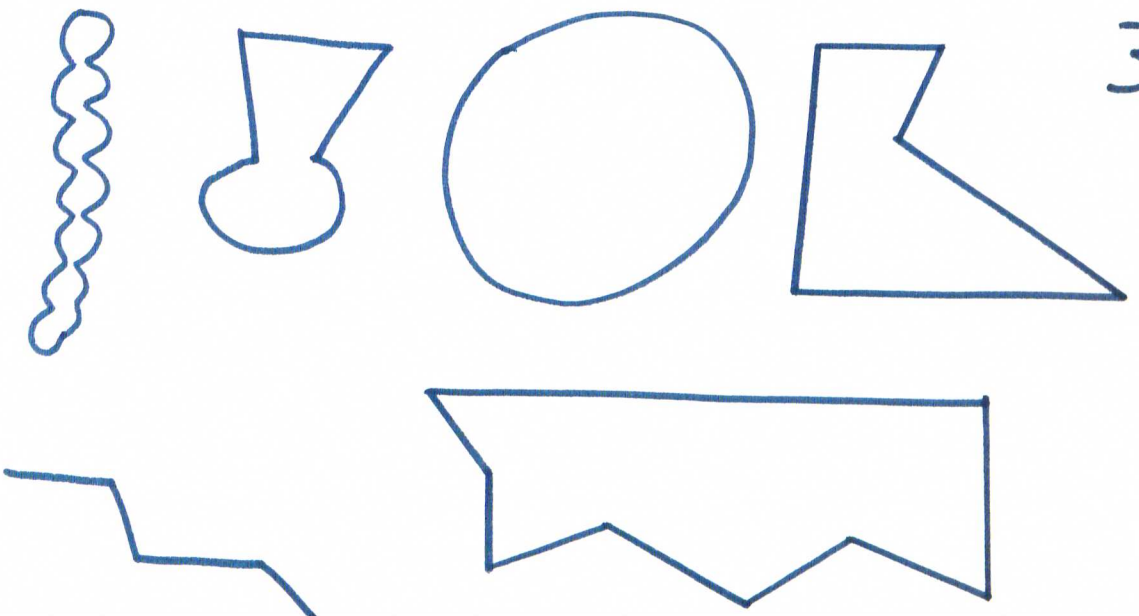

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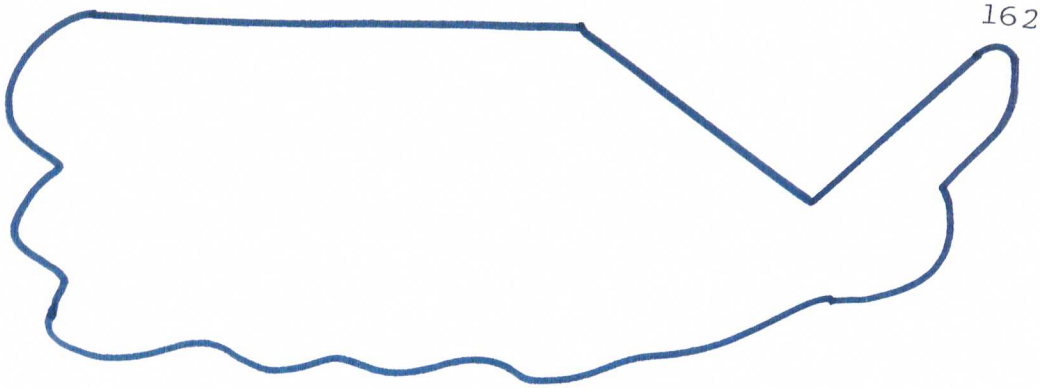

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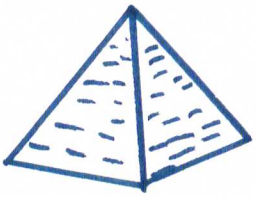

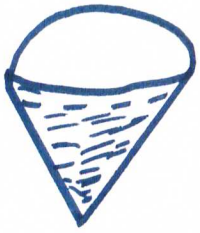

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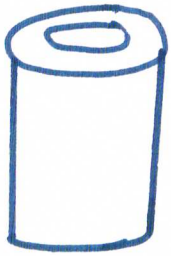

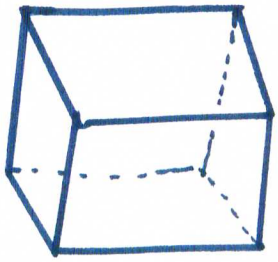

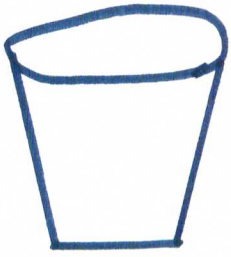

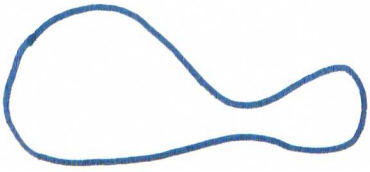

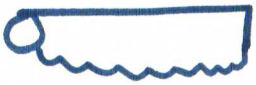

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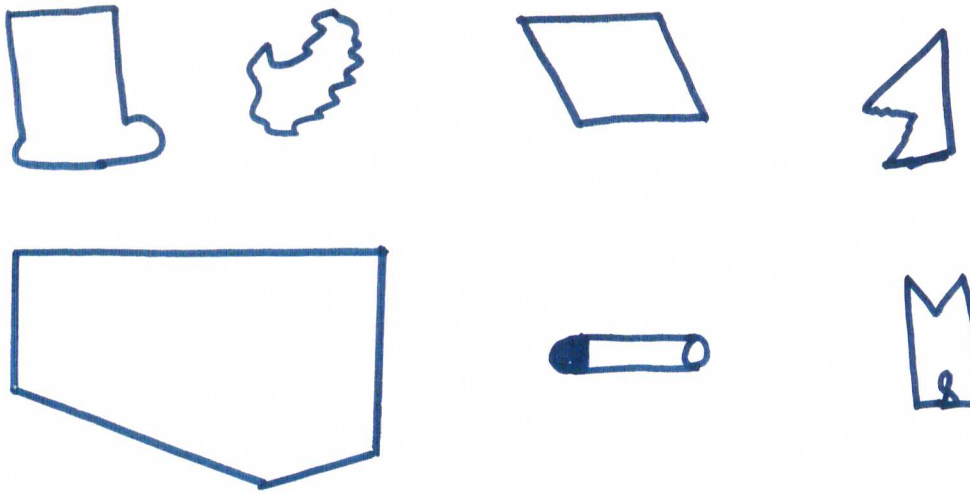

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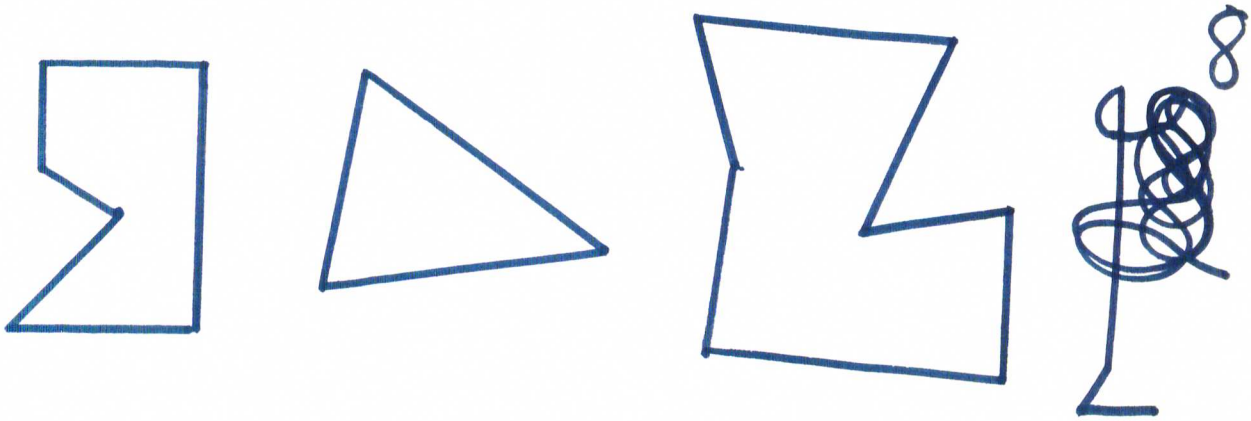

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APPENDIX H

COMPOSITE SCORES OF SUBJECTS ON THE ASSESSMENT TASK

TABLE 6

COMPOSITE SCORES OF SUBJECTS ON THE ASSESSMENT TASK

Subject	Sub-culturally Appropriate	Standard
1	4	3
2	5	5
3	3	5
4	8	5
5	6	6
6	6	5
7	3	3
8	8	3
9	5	5
10	3	3
11	3	1
12	8	1
13	9	3
14	8	6
15	8	2
16	5	4
17	7	9
18	4	3
19	6	3
20	6	5

TABLE 7

INFORMATION USED FOR COMPUTING F-MAX TEST

Sub-culturally Appropriate	Standard
$M = 5.75$	$M = 4$
$\Sigma X_{SA} = 115$	$\Sigma X_S = 80$
$N = 20$	$N = 20$
$\Sigma d^2 = 86.75$	$\Sigma d^2 = 68$
$s^2 = \frac{86.75}{20}$	$s^2 = \frac{68}{20}$
$= 4.34$	$= 3.4$

$P(\text{F-max} > 2.46) = .05$

Observed F-max = 1.27 does not fall in the critical region; hence, the hypothesis: The two samples have the same variance was accepted.

APPENDIX I

DATA USED FOR THE ANALYSIS OF VARIANCE

TABLE 8

DATA USED FOR THE ANALYSIS OF VARIANCE

(The data are given in Appendix H, Table 6, page 165. Note that $j = 2$, and $n_j = 20$ for each group j)

$$\sum_j \sum_i X_{ij}^2 = 1135 \qquad \sum_j \sum_i X_{ij} = 195$$

$$\sum_j \frac{\left(\sum_i X_{ij}\right)^2}{20} = \frac{(80)^2 + (115)^2}{20} = 981.21$$

$$SS_T = 1135 - \frac{(195)^2}{40} = 184.4$$

$$SS_B = 981.21 - \frac{(195)^2}{40} = 30.61$$

$$SS_W = 184.4 - 30.61 = 153.79$$

Choice of Test: F- test (analysis of variance)

Sampling distribution: F with 1, 38 df

alpha-level = .05

Rejection region: $F = 4.10$

Decision: Reject H_o: $\mu_{SA} = \mu_S$

APPENDIX J

PERSONAL DATA OF THE SUBJECTS

TABLE 9

OCCUPATION OF FATHER OF SUBJECT

Language	Occupation of Father	Total
Sub-culturally Appropriate	Book Binder	1
	Father Unknown	9
	Retired	1
	Truck Driver	2
	Sanitation Department Worker	2
	Welfare	1
	Private Business	1
	Barber	1
	Cafeteria Worker	1
	State Department Worker	1
Total		20
Standard	Self-employed	1
	Community Worker	1
	Construction Worker	2
	Cook	1
	Salesman	1
	U.S. Printing Office	1
	Stock Clerk	1
	Porter	1
	Father Unknown	11
Total		20

TABLE 10

AGE AND YEARS IN PRESENT SCHOOL OF SUBJECTS

Subject	Sub-culturally Appropriate Language					Standard Language				
	Sex	Age		Years in Present School		Sex	Age		Years in Present School	
		Yrs	Mos	Yrs	Mos		Yrs	Mos	Yrs	Mos
1	M	5	9	0	3	M	6	1	1	1
2	M	6	2	1	8	M	6	5	0	1
3	F	6	9	1	9	M	8	2	2	1
4	F	7	8	1	1	M	7	9	2	0
5	M	7	5	1	1	F	7	5	1	1
6	M	7	5	2	1	F	7	1	0	10
7	F	6	1	1	1	M	6	2	1	1
8	F	7	2	2	1	M	6	0	1	1
9	M	8	2	2	0	F	6	2	1	2
10	M	7	5	0	4	F	6	5	1	0
11	F	7	8	2	1	M	7	5	0	2
12	F	8	2	2	1	F	6	3	1	1

TABLE 10--Continued

Subject	Sub-culturally Appropriate Language					Standard Language				
	Sex	Age		Years in Present School		Sex	Age		Years in Present School	
		Yrs	Mos	Yrs	Mos		Yrs	Mos	Yrs	Mos
13	F	7	3	0	2	M	7	3	2	1
14	F	7	9	2	1	F	5	10	1	1
15	M	6	7	1	0	F	6	6	1	1
16	M	6	11	2	1	F	8	10	1	0
17	M	6	9	1	1	F	8	2	8	2
18	F	7	2	2	1	M	5	11	0	4
19	F	7	0	0	2	M	6	8	1	2
20	M	6	1	1	2	F	5	5	0	2

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